

DECLASSIFIED

MS 7/29/15



SEPARATOR



54-00068



HAZ WASTE



COMPLIANCE



06/01/1993



N/A



9545101



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-4632



Certified Mail Return Receipt  
P 905 079 272

June 1, 1993

54-00068

Permit No. ....  
Media: Air, Water, Solid, Hazardous  
Port: Permit, Compliance

Mr. John Wagner  
Environmental Engineer  
Cedar Chemical Company  
West Helena Plant  
Highway 242  
West Helena, AR 72390

RE: Conditional Approval of Workplan

Dear Mr. Wagner:

The Department reviewed the RFI Workplan dated for the Cedar Chemical Company (Cedar) January 22, 1993, and determined the plans to be conditionally complete. The conditions for approval of the Workplan are attached. Cedar must respond to the conditions for approval within thirty (30) days of the receipt of this letter.

If the response to the conditional approval is not sufficient, the Department reserves the right to modify the workplan. The modified work plan will then be the approved workplan.

Sincerely,

Joseph M. Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division

cc: Mike Bates, Chief, HWD  
Phillip Murphy, HWD  
Jerry Williams, HWD  
David Hartley, HWD

PM:cw wagnr.601

Enclosure



Cedar Chemical Corporation  
Conditional Approval  
RFI Workplan  
May 20, 1993

1. Cedar must submit a laboratory quality assurance plan within thirty (30) days.
2. Recently discovered documents at ADPC&E indicate drums were uncovered during the construction of Unit 4. Cedar will investigate this area.

1.2.6.3. Monitoring Well Installations

3. An on-site Arkansas Registered Geologist should be present during all monitoring well drilling activities. This individual is responsible for logging the borehole, proper identification of water bearing zones, selection of the screened interval, and choosing the appropriate type of well to construct. All boring logs should be signed and dated by this individual.

1.2.6.4. Monitoring Well Development

4. All water purged from the wells must be properly disposed of and not placed onto the ground or allowed to run-off into surface waters.

1.2.6.5 Ground water Sampling

5. Cedar must submit procedures for calibrating the portable field instruments with standard solutions and the frequency for doing so prior to use within thirty (30) days.

1.2.7 Decontamination Procedures

6. Cedar must describe how the decontamination area will be constructed to prevent possible contamination to the area.

1.3.1 Ground water Quality Assessment Plan (GWQAP)

7. Cedar must include provisions for evaluating the existing wells and piezometers to determine if they are suitable for use prior to sampling. Upon construction of new wells, all new and existing wells and piezometers should be surveyed by an Arkansas licensed surveyor, who should certify that the top of casing elevations are surveyed to the nearest hundredth of a foot in a horizontal plane. A layout plan showing all wells must be provided.
8. Cedar is advised that previous well and piezometer reports reference top of ground surface elevations rather than top of casing elevation, which is where the measurement is made. Piezometers were certified only to the nearest tenth of a foot rather than the nearest hundredth of a foot, which is required. The Department has found no evidence of ground water elevations being adjusted for the difference between ground surface and the top of the well casing. Considering this fact, the accuracy is highly questionable for the purpose of determining ground water flow direction.



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9. Cedar must submit procedures for plugging and abandonment methods to be followed. It was also recommended previously that Cedar plug and abandon the old production well, which has not been used in several years.
10. The purpose of the GWQAP is to define the nature and extent (horizontal and vertical) of contaminants which emanated from the site. It is to be understood that this may involve the assessment of ground water contamination beyond the facility boundaries with the installation of additional wells. This may be through a phased approach. Cedar must propose to the Department a schedule to submit supplemental work plans, implement the work, and report the findings of the additional work.
11. Cedar must define what is considered evidence of contamination, which will require further implementation of the GWQAP. The Department concludes that the site has impacted ground water quality, based upon the data submitted by Cedar and obtained by the Department. The recommended criteria is listed below:
  - a. Parameters or constituents exceed EPA Primary Drinking Water standards and/or Secondary Drinking Water Standards and determined to be statistically significant, when compared to background water quality, utilizing an approved statistical method. Cedar shall choose one of the statistical methods defined in §40 CFR 264.97(h).
  - b. Statistically significant and deemed necessary by the Department. The facility may offer an explanation to the Department as to the cause for statistical significance and propose a course of action, which is subject to approval. The Department may split samples during any resampling or sampling event for consideration in making the determination.
  - c. The facility may propose to use parameters and constituents which are reliable indicators of contamination during subsequent monitoring events and investigations for the purpose of completing the ground water quality assessment plan (GWQA). Any parameter or constituent and its intended use is subject to Departmental approval. The number of samples shall be appropriate for the statistical test chosen.
  - d. For the purpose of the initial investigation, any organic constituent detected in downgradient wells that is not detected in upgradient wells is considered evidence of contamination. The facility may resample the affected well to verify the results. If the facility chooses not to resample, or if the resampling confirms contamination, this will form the basis for initiating additional investigations as deemed necessary by the Department.



Cedar Chemical Corporation  
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- e. The facility shall continue to make these determinations at least quarterly, until the nature and extent of contamination is determined. Each time this is reported, the facility shall propose to the Department a course of action. Upon approval, the facility shall implement the approved course of action.
12. The facility shall notify, in writing, property owners who are determined to be within or likely affected by any plume of ground water contamination that has emanated from the site. Any private wells on the affected properties shall be identified. The facility shall offer to sample such private wells or attempt to gain access to properties for the purpose of installing monitoring wells as necessary to complete the objectives of the GWQAP. Cedar shall offer to plug any private well determined to be contaminated by this plume.
13. The GWQAP must include provisions for the installation of well clusters when necessary to define the vertical extent of contamination. Well cluster 6, which was installed in a previous investigation, indicates anomalous water levels (mounded or perched conditions). Contamination was also detected by ADPC&E in each screened interval. Therefore, the GWQA must also further characterize the hydrogeology and migratory pathways. It is possible that some of the existing piezometers are suitable for sampling as monitoring wells in the preliminary investigation. It is also noted that MW-6 exhibits higher TOC and TOX values than MW-6A, which indicates the possibility of a deeper plume of contamination that must be investigated.
- 1.3.2 Site #1
14. One well cluster shall be installed during this first phase of ground water investigation at this area. Previous reports by Cedar (August 23, 1990, letter from Joe Porter, et al) indicate that perched conditions or mounding in the ground water are likely at this unit.
15. TCLP analysis of the sediment may determine if sediment is characteristically hazardous, but is not adequate for evaluating all contaminants which could be impacting ground water quality. It is also noted that RCRA waste codes F002, F005, P066, P106, and U020 were historically allowed (Part A Application) for treatment in the impoundments, although unknown to be actually be treated. In addition, Cedar states in the DOCC that API separator sludge has routinely been allowed to discharge into the treatment plant and has not characterized this waste. It is also noted in the previous pond sediment analysis that toluene, xylene, and ethylene dichloride were reported in most sediment samples. The analysis of samples from these SWMU's should be expanded to evaluate the potential for contamination to escape from the unit.



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16. Cedar must investigate the tank which was previously used to store API separator sludge. No information has been presented to document the date of last use or the closure of the tank.

1.3.3 Site #2

17. ADPC&E believes that biasing sampling results solely to relative chloride concentrations is not be suitable for all constituents of concern. It is noted that high concentrations of non-halogenated organics were also reported in the previous investigation (Ecology and Environment 1986). Station H-2 in that investigation reported high concentrations of non-halogenated solvents without the detection of chlorinated compounds. Volatile organics must be biased independent of chloride content.

1.3.5 Site #4

18. Existing ground water monitoring locations are located a considerable distance from this site and may be influenced by other SWMU's. This part of the plant requires additional ground water investigations. The existing monitoring well locations will yield inconclusive data on the impact of this SWMU to ground water. Cedar must submit a proposal for ground water monitoring system for this area within thirty (30) days.

1.3.7 Site #6

19. The Department is very concerned with the possibility of an unidentified impoundment that was used for disposal of dinoseb production wastes in 1972 as a continuing source of contamination. All existing information was reviewed and it is believed that this impoundment may be located west of the maintenance shop and north of the first drum disposal area. It is also believed that routine discharges, due to the lack of a discharge permit, may have led to more extensive contamination of surrounding soils. Cedar must investigate this area for the following reasons:
1. The Site Characterization Report DCA Process Area, June 1990, revealed high concentrations of dinoseb (greater than the 80 ppm threshold value previously used) in borings B2-5 and C1-5. Concentrations exceeding 36,000 ppm were reported by Cedar in C1-5 at 0-5' and greater than 18,000 ppm in the 5-10' interval.
  2. A magnetometer survey was also conducted in this investigation. A major anomaly is evident in the northwest portion of the survey. An explanation of this anomaly has not been presented to the Department. It was reported that at least one trench was done within this anomalous zone. However, no information was reported from that particular trench. It was also reported that the data had been corrected for sources of magnetic noise.



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3. Trench T-1 in this investigation is also noted to have high levels methoxychlor (93.76 ppm), 3,4DCNB (444.8 ppm), and other contaminants.
  4. Information was submitted in a Part B permit application indicating a "highly contaminated area" in this vicinity.
20. Cedar states that yellow staining does not necessarily represent high levels of contamination, yet proposes to investigate the presence of the unidentified impoundment based solely upon visual observations. A relationship between concentration and yellow staining has not been established at this time.

1.3.8 Site #7

21. Cedar has no basis for deleting this SWMU from the investigation. The Department has established historical usage of this unit by eye witnesses. ADPC&E personnel have identified the wetland area as an area that served as a temporary holding pond while repairs were being made to the wastewater treatment area. The area received storm water runoff from the old waste water treatment area as seen by aerial photographs and the area could have received intentional releases of the material in the wastewater treatment area when the ponds were in danger of over-topping the berms. The workplan must include sampling in this area.

1.3.9 Site #8

22. Cedar must either provide data indicating that contamination observed by ADPC&E around the API separator was cleaned up (including verification analysis) or sample at this unit. All analytical data for disposal and clean-up must be submitted for further consideration.

1.4.3 Ground water Sample Analysis & Quality Assurance

23. Table 1-4 lists different analytical methods than section 1.3.1 (GWQAP). This must be rectified.
24. Table 1-6 lists different analytical methods than section 1.3.1. This must be rectified.

Appendix B

25. Although metal analysis proposes more than one analytical method, methods 200.7/6010 quantitation limits for arsenic, lead, and selenium exceed primary drinking water standards. All limits used must be less than primary drinking water standards.

Appendix D

26. The FIWP does not propose to investigate the SWMU's which were



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identified in the depositions obtained in the Wormald suit. Cedar must investigate these SWMU's. Cedar must file a plan to investigate these SWMUs within thirty (30) days.

General Comments

27. The workplan is somewhat vague as to how the data will be used to evaluate when corrective action is required for contaminated soil. For example, the relationship between soil contamination and resulting surface water contamination or ground water contamination is not delineated. The selection of action levels must be based upon the actual potential of intermedia transport. The Department will require additional investigation, if necessary, to accomplish this relationship.
28. The workplan does not adequately further characterize hydrogeologic conditions to the extent necessary to develop a corrective action plan for ground water. The Department will require additional phases to accomplish this as determined necessary through the implementation of the GWQA if the Department considers it necessary.
29. Cedar must submit a plan for evaluating the need for further investigation of the extent of contaminated soils.



# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

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10w  
AUG 10 1992

August 7, 1992

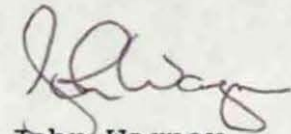
Mr. Joe Hoover  
Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Consent Administrative Order LIS 91-118

Dear Joe:

Enclosed is various correspondence which may help to fill in some of the gaps related to Cedar Chemical and the coordination within PC&E.

Sincerely,



John Wagner

CERTIFICATE BOND

25% COTTON FIBER

# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

August 5, 1992

Randal K. Oberlag  
Enforcement Engineer  
NPDES Enforcement Section  
ADPC&E P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Outfall 001 Sampling Results

Dear Randal:

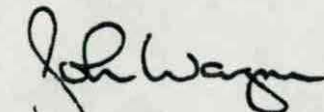
The following COD/pH results have been recorded for stormwater events since the last failed test on May 6, 1992:

1. June 3 - COD 63.5/pH 7.1 - Pass
2. June 11 - COD 94.7/pH 8.2 - Pass
3. July 17 - COD 31.3/pH 7.7 - Pass
4. July 31 - COD 72.4/pH 7.6 - Pass
5. August 5 - COD 28.1/pH 7.7 - Pass

Explanation of events possibly contributing to these results:

1. Excavations on the plant site have ceased and a stand of grass is now stabilizing the sediment.
2. Contamination from the leaking process waste pipe, previously reported removed, has been purged from the stormwater system.
3. The boiler blowdown has a COD of 124 mg/l and it was re-directed to the treatment system on July 22.
4. Prior to June there was another process wastewater line that consistently developed leaks adjacent to a stormwater ditch.
5. Housekeeping changes during April and May have eliminated possible sources of contamination.

Sincerely,



John Wagner



## CEDAR CHEMICAL COMPANY

## VIOLATIONS FROM 11/90 TO 5/92

				LIMIT
11/90	002A	AMMONIA-NITROGEN, 30 DAY AVG.	11.7 LBS/DAY	10
		DAILY MAX.	21.3 LBS/DAY	20
12/90	001A	COD, DAILY MAX.	812.9 MG/L	100
		OIL AND GREASE, DAILY MAX.	22.2 MG/L	15
		PH, MAXIMUM	9.9 S.U.	9.0
	002A	AMMONIA NITROGEN, 30 DAY AVG.	12.6 LBS/DAY	10
		DAILY MAX.	33.9 LBS/DAY	20
02/91	001A	COD, DAILY MAX.	387.3 MG/L	100
03/91	001A	COD, DAILY MAX.	512.7 MG/L	100
		PH, MAXIMUM	9.2 S.U.	9.0
04/91	001A	COD, DAILY MAX.	199.6 MG/L	100
	002A	AMMONIA NITROGEN, 30 DAY AVG.	11.2 LBS/DAY	10
05/91	001A	COD, DAILY MAX.	139.4 MG/L	100
	002A	AMMONIA NITROGEN, DAILY MAX.	21.1 LBS/DAY	20
		T.LEAD, DAILY MAX.	.576 LBS/DAY	.24
08/91	001A	COD, DAILY MAX.	106.8 MG/L	100
		PH, MAXIMUM	10.9 S.U.	9.0
12/91	001A	COD, DAILY MAX.	137.5 MG/L	100
		PH, MAXIMUM	10.3 S.U.	9.0
		OIL AND GREASE, DAILY MAX.	23.5 MG/L	15
		T.CHROMIUM, DAILY MAX.	.503 MG/L	.4
		T.LEAD, DAILY MAX.	.680 MG/L	.4
01/92	001A	COD, DAILY MAX.	1256.2 MG/L	100
02/92	001A	COD, DAILY MAX.	493.9 MG/L	100
03/92	001A	COD, DAILY MAX.	933.9 MG/L	100
05/92	001A	COD, DAILY MAX.	215.5 MG/L	100
		PH, MAXIMUM	10.1 S.U.	9.0



# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

July 29, 1992

Mr. Randal K. Oberlag, P.E.  
Enforcement Engineer  
NPDES Enforcement Section  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Cedar Chemical NPDES Response

Dear Mr. Oberlag:

In response to the July 22 meeting concerning COD/pH violations at the Cedar Chemical Corporation, West Helena facility, we are providing notification of our willingness to enter into a Consent Administrative Order (CAO) with the Arkansas Department of Pollution Control & Ecology (ADPC&E) in order to address these violations at outfall 001.

Currently, a Corrective Action Plan (CAP) is being developed to address this topic. It will be submitted at a later date as a requirement of the CAO. Cedar's legal counsel has contacted the ADPC&E legal department in order to understand whether this CAO can be entered as an addendum to the CAO under which we are currently operating (No. LIS 91-118 issued in July 1991). CAO LIS 91-118 requires assessment and remediation of Solid Waste Management Units (SWMUs) that we feel are contributing to the problems at outfall 001. It has been recommended by the ADPC&E Hazardous Waste Enforcement Division that outfalls 001 and 002 be listed as SWMUs.

Cedar is involved in an ongoing Toxicity Reduction Evaluation (TRE) approved by ADPC&E on April 1, 1992. Although the purpose of the TRE is to address biomonitoring at outfall 001, we feel that it could be broadened to include the CAP for COD/pH. Since there appears to be overlap between the TRE, the CAP and the CAO, Cedar suggests that further coordination of the programs is required which could be formalized by the CAO.

The CAP will also take into consideration the effect of corrective measures at 001 on Cedar's only other NPDES outfall, 002. Outfall 002 is the discharge from the biotreatment system into the Mississippi River.



As has been pointed out in CAO LIS 91-118, much of the contamination, and the potential for contamination, which exists at the site is a result of activities that occurred prior to Cedar's acquisition of the plant in 1986.

In order for Cedar to continue on schedule with the TRE, it is necessary that we immediately discharge from outfall 001 to perform required bioassay tests. In addition, the current treatment system volume capabilities are such that it would be necessary to discharge through 001 if we received a succession of heavy rains. Therefore, we request that we be assigned interim limits on COD and pH at outfall 001. The limits we request are COD limits of 600 mg/l average, with 1,200 mg/l allowable in a "one time scenario", and a pH maximum of 11.0. If approved, these limits would become effective immediately, and remain until outfall 001 is abandoned, which is the goal of the TRE plan, or until October 30, whichever is sooner. Outfall 001 will be abandoned sooner than the TRE schedule requires if the treatment system capacity allows it.

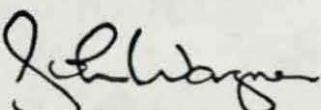
Attached to this letter is a summary of investigations and corrective actions which had already been implemented, or were in the process of being implemented, at the time we received your letter of July 8. I hope that this list demonstrates Cedar's past and future commitment to achieve full NPDES permit compliance, and to carry out an aggressive program of corrective action to achieve that goal.

As you undoubtedly know, such a program has involved, and will involve substantial expenditures. Inasmuch as Cedar's NPDES compliance problems have been exacerbated by recent construction activity, and therefore not anticipated, the costs referred to above were not budgeted last year. I hope that you will work with us in finding cost effective methods to aggressively implement plans which will help assure compliance with our permits without diverting funds which could otherwise be used for these purposes.

Please let me know if we can schedule a meeting with Cedar's consultant, Bruce Shackleford, and myself, the week of August 3 in order to discuss the technical aspects of the CAP and CAO. Our corporate counsel will be available to meet with your counsel regarding the framework and other provisions of the CAO at any time after August 10, 1992.

I hope that this is fully responsive to our meeting of July 22, and I look forward to hearing from you.

Sincerely,



John Wagner



SUMMARY OF INVESTIGATIONS AND CORRECTIVE ACTIONS  
RELATED TO OUTFALL 001  
BUT  
NOT INCLUDING TASKS DIRECTED BY CURRENT CAO

NON-CAPITAL EXPENDITURES

1. October 1991 to April 1992 - Removed three accumulations of buried drums and the associated contaminated soil. Cost - \$1,800,000.
2. February 1992 - Conductivity survey of plant site to determine if other accumulations of buried drums were present. Cost - \$16,800
3. February 1992 - API separator and pad at treatment system cleaned, and soil containing spilled material dug up. Cost - \$2,700
4. March 1992 - Began introduction of Phenol fighting micro-organisms into treatment system in order to allow for higher discharge rate at 002 so we could capture more stormwater. Cost - \$4,600 to date
5. March 1992 - Consultant contracted to perform TRE. Cost plus anticipated bioassay costs exclusive of TIE - \$35,000
6. March 1992 - Began six-month plan to dispose of accumulated, non-hazardous waste drums. Cost - \$165,000
7. March 1992 - Under the guidance of the CAO, requested permission to remove visibly contaminated soil and send to Subtitle C landfill. Request denied by Hazardous Waste enforcement.
8. April 1992 - Modified sampling techniques at outfall 001 to give a more representative sample.
9. April 1992 - Changed to Entek Laboratories for our bioassays, even though they were considerably more expensive, because they were certified by ADPC&E.
10. July 1992 - Repositioned aerators and flow lines in biotreatment system to maximize activity. Cost - 40 manhours
11. Ongoing efforts to improve housekeeping by changing maintenance equipment cleaning methods, laboratory waste collection and drum management, all of which contribute to contamination at outfall 001. Two employees are assigned full-time to these tasks and to maintenance of the stormwater system.

NON-CAPITAL EXPENDITURES OCTOBER 1991 TO PRESENT - \$2,024,900



CAPITAL EXPENDITURES

1. September 1991 - Removed several hundred feet of transite pipe believed to be leaking process waste, destined for the treatment system, into the stormwater sump and area around outfall 001. Cost - \$600 equipment rental plus 30 manhours of labor
2. February 1992 - Excavation work to redirect flows in stormwater system. Cost - \$3,060
3. February 1992 - Gutter installed around API separator at treatment system to prevent overflow. Cost - \$900
4. February 1992 - Installed replacement flowmeters at influent and effluent ends of treatment system because of unreliability of old units. Cost - \$6,400
5. April 1992 - Enlarged stormwater sump. Cost - \$1,500
6. April 1992 - Reworked stormwater drainage system by enlarging and cleaning out ditches. Cost - \$2,000
7. June 1992 - Re-lined sump at drum staging area because believed leaking. Cost - \$7,200
8. July 1992 - Captured boiler blowdown that normally went into stormwater ditch and redirected it to treatment system. Cost - \$18,000
9. Construct a drum management area with secondary containment and shelter area. Cost - \$12,000
10. An inspection of the API separator at the treatment system determined that it is not operating to its full potential, so we are budgeting a new unit for 1993. Cost - \$50,000

CAPITAL EXPENDITURES COMPLETED OR PLANNED - \$105,260



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-7444  
FAX: (501) 562-4632

August 7, 1992

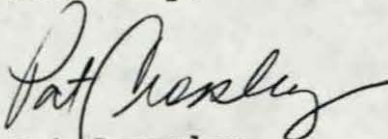
Mr. Allen T. Malone  
APPERSON, CRUMP, DUZANE & MAXWELL  
One Commerce Square, Suite 2110  
Memphis, Tennessee 38103

Re: In the Matter of: Cedar Chemical Corporation,  
West Helena, Arkansas, LIS 91-118

Dear Mr. Malone:

This is to confirm a meeting to discuss the above-referenced matter on August 14, 1992 at 10:00 a.m. at the Department of Pollution Control and Ecology, Administration Building, Room C located at 8001 National Drive, Little Rock, Arkansas. Hopefully, we will finalize any necessary action to assure that corrective actions will be coordinated.

Sincerely,



Pat Crossley  
Staff Attorney

PC/pn

cc: ✓ Joe Hoover, Hazardous Waste Enforcement Branch Manager  
Randal Oberlag, NPDES



RECEIVED

JUL 29 1992



Environmental and Safety Designs, Inc.

P. O. BOX 341315, MEMPHIS, TN 38184-1315

(901) 372-7962

Fax (901) 372-2454

DATE:

7/29/92

TO

Name:

John Wagner

Company:

Cedar Chemical

FROM

Name:

Todd Bennett

Total number of pages (including cover sheet):

3

COMMENTS

Response to comments from ADPC+E



**Cedar Chemical Corporation**  
**West Helena Plant**  
**Response to Comments**

Comment	Response
1	All adjacent landowners appear to be identified in Figure 2.3.
2	Figure 2.1 includes all drainage features for the site and identifies the two NPDES outfalls for the site. If they want it simplified we can do that.
3	Construction diagrams would have to be provided to include all active and inactive piping systems. The active wastewater piping is shown in Figure 2.1 and the leaking pipe they are referring to has been removed.
4	I have no knowledge of the existence of these wells.
5	If the regional geologic map will not suffice we will contact additional agencies to find one that will be acceptable.
6	Table 2.1 is the product of an in-depth audit of all past and present operations at the Cedar Chemical facility. It lists all processes, the waste generated, and how they are disposed. Table 2.2 gives a history of all hazardous waste disposal conducted at the facility based upon the same audit. Detailed analysis of hazardous waste streams is not available since most waste streams are declared hazardous by knowledge of process which is allowed under 40 CFR 261 Subpart B.
7	Once again, Table 2.1 lists all chemicals involved in each process stream and the final products. All chemical and physical properties of each substance is ridiculous but can be found in the volumes of MSDSs.
8	I believe this is a typographical error in the Sorrells report. One table shows an effluent sample with this low flash point while a summary table shows a sediment sample with this flash point which would account for the report citing 40 CFR 261.21(a)(1). I am also checking the method used to determine what actually constitutes a positive result, I don't think this does.
9	See Comment 8.
10	Given the age of this problem, it is unlikely that any volatile "carriers" still exist. The pesticides disposed of on the ground were also in the form of process wastewater and may not have included significant amounts of volatiles.
11	No problem.



- 12 I don't think this is a key issue, but I think it can be done.
- 13 Table 2.1 lists all processes in which hazardous waste is generated. We did not include the information on solid waste generated and volumes. I assume most of it is sent to the biological treatment ponds.
- 14 Is there any information disclosed in the depositions we have not mentioned?
- 15 See Comment 5.
- 16 I don't remember agreeing to this, especially since what they are asking for is to recreate the RFA.
- 17 I don't think many of these are warranted.
- 18 If no analytical data supporting the classification of waste as non-hazardous is available, it probably should be done.
- 19 If available we need to provide, but it is ridiculous to replace them because no construction diagrams are available.



CHARLES W. METCALF, 1840-1924  
WILLIAM P. METCALF, 1872-1940  
JOHN W. APPERSON, 1896-1985

LAW OFFICES

APPERSON, CRUMP, DUZANE & MAXWELL

SUITE 2110

ONE COMMERCE SQUARE

MEMPHIS, TENNESSEE 38103

901 / 525-1711

TELECOPY 901 / 521-0789

EAST OFFICE:

SUITE 100

KIRBY CENTRE

1755 KIRBY PARKWAY

MEMPHIS, TENNESSEE 38120

901 / 756-6300

TELECOPY 901 / 757-1296

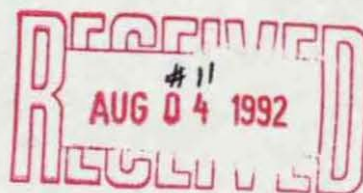
July 31, 1992

CHARLES METCALF CRUMP  
JERRE G. DUZANE  
JOHN B. MAXWELL, JR.  
ALLEN T. MALONE  
PHILIP G. KAMINSKY  
ROBERT L. DINKELSPIEL  
HENRY L. KLEIN  
ROSS B. CLARK II  
JAMES F. RUSSELL  
JOHN L. RYDER  
THOMAS R. BUCKNER  
BRUCE M. SMITH  
TONI CAMPBELL PARKER  
STEVEN N. DOUGLASS  
RANDY S. GARDNER  
KAREN R. WILLIAMS  
\*\*PATRICIA B. STEGEMANN  
\*\*\*ROBERT E. YORK  
\*ELIZABETH ANN CAMP

\*ALSO ADMITTED IN MISSISSIPPI  
\*\*ALSO ADMITTED IN NEW YORK  
\*\*\*ALSO ADMITTED IN PENNSYLVANIA

SAMUEL RUBENSTEIN  
OF COUNSEL

Ms. Pat Crossley  
Attorney  
Arkansas Department of Pollution  
Control & Ecology  
P. O. Box 8913  
Little Rock, Arkansas 72219



Mr. Joe Hoover ✓  
Enforcement Branch Manager  
Hazardous Waste Division  
Arkansas Department of Pollution  
Control & Ecology  
P. O. Box 8913  
Little Rock, Arkansas 72219

Mr. Randal K. Oberlag, P.E.  
Enforcement Engineer  
NPDES Enforcement Section  
Arkansas Department of Pollution  
Control & Ecology  
P. O. Box 8913  
Little Rock, Arkansas 72219

Re: In the Matter of: Cedar Chemical Corporation,  
West Helena, Arkansas, LIS 91-118

Dear Ms. Crossley and Gentlemen:

Anne BoBo may have mentioned to you that we have discussed this week matters relating to the referenced CAO. Because of a letter from Randal Mathis to Wormald dated May 15, 1992 (copy enclosed) indicating that a response should be sent to Ms. Bobo, it was my impression that the referenced CAO had been assigned to her. I learned today that the case is still assigned to Ms. Crossley, and I apologize for the confusion.

Enclosed is a memorandum prepared by Jeff Bennett with ENSAFE, the environmental engineering firm that has been retained by Cedar to assist in preparation of documents required by the



Ms. Pat Crossley, et al.  
July 31, 1992  
Page 2

referenced CAO. Jeff's memo summarizes his view of the Department's Notice of Deficiencies sent by letter dated July 13, 1992 from Joe Hoover with regard to Cedar's Current Conditions Report. The initial Report was prepared and submitted on Cedar's behalf by ENSAFE last October. Following a subsequent Notice of Deficiencies, Jeff Bennett and John Wagner met with Joe Hoover to clarify what was expected in the way of additional information and a revised report was submitted last April.

A meeting has tentatively been set for August 14 at 10:00 a.m. for John and Jeff to meet once again with Joe Hoover to get clarification on the Department's current comments. John Wagner would like me to attend, and we would also appreciate it if Mike Bates could attend. I hope that you will attend as well.

My main contribution hopefully would be to help assure that there is no misunderstanding about what will be included in the final revised version of the Report. In addition, I could summarize information contained in the course of discovery proceedings in the Wormald suit. In that regard, we were required to enter into a Protective Order in order to obtain certain of Wormald's documents so I would not be able to give the Department unrestricted access to the documents obtained. For the most part, this information relates to dinoseb production and waste disposal activities on the site during the year 1972, when it was controlled by The Ansul Company.

In any event, I feel certain that Cedar will need more than the thirty days specified in Joe Hoover's letter in which to prepare a second revised report that will be acceptable to the Department, so I would ask your agreement to extend this deadline to a date thirty days following the meeting requested at the Department. Please bear in mind that Cedar's submission of a revised Facility Investigation Work Plan is being delayed pending completion and approval of the Current Conditions Report, so we would like to move forward with this matter as soon as possible.

The enclosure is a letter from John Wagner to Randal Oberlag with regard to the NPDES issues which I discussed with Anne Bobo earlier this week, and briefly with Ms. Crossley today. If the Department feels it is essential to address the TRE\Corrective Action Plan which is already under way in the form of another CAO, I think it would make a lot of sense to do it as an Amendment to the referenced CAO. There seems to be a fair amount of overlap in corrective action with regard to NPDES issues and corrective action



Ms. Pat Crossley, et al.  
July 31, 1992  
Page 3

previously undertaken and contemplated in the future under the referenced CAO. I just learned today that Randal Oberlag is acting as attorney for the Department in connection with that matter (I had previously thought he was acting as head of NPDES Enforcement with respect to technical issues).

Earlier this week, John Wagner and Bruce Shackelford, another consultant advising Cedar on NPDES issues, arranged a meeting for next Thursday with Randal Oberlag and others at the Department (including, I believe, Joe Hoover). Hopefully, they can reach agreement on a scope of work for the proposed Corrective Action Plan at that time. Implementation of such a Corrective Action Plan could perhaps be initiated as an "interim measure" under the referenced CAO while the FIWP is awaiting approval. If a separate CAO is contemplated, I would hope in any event that procedures could be put in place that will assure that corrective action under both orders will be coordinated.

Since I will be out of the country for the next nine days, I will not be able to participate in the meeting next week. John Wagner told me today that Randal Oberlag would like to discuss an agreed penalty for NPDES Permit violations. John Wagner can listen to his views on that subject and discuss them with Cedar's management and me when I return but he is not authorized to negotiate on that issue. Cedar feels that John's role should be limited to environmental compliance issues. If the second meeting requested for August 14 can be arranged, I would be prepared to address this issue at that time.

Sincerely yours,

Allen T. Malone

ATM:jw

Enclosures

cc: Mr. Mike Bates  
Mr. John Wagner  
Mr. Jeff Bennett, ENSAFE  
Mr. Bruce Shackelford, ECO



7-20-92 AWD Cm 9:41 PM  
P 762 177 232



# Certified Mail Receipt

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Sent to <i>Wagner</i> <i>Cedar Chem Corp</i>	
Street & No. <i>P.O. Box 2749</i>	
P.O., State & ZIP Code <i>West Helena AR 72390</i>	
Postage	\$ <i>29</i>
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PS Form 3800, June 1990





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3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to the back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
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CM 9H PM

7-20-92

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**HAZARDOUS WASTE**

- Complete items 1 and/or additional services.
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3. Article Addressed to:

Wagner  
Cedar Chemical Corp  
P. O. BOX 2749  
West Helena AR 72390

4a. Article Number

P 762-177-232

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| <input type="checkbox"/> Registered           | <input type="checkbox"/> Insured                        |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD                            |
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Sheila Fraiser

JUL 22 1992



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ARKANSAS DEPARTMENT OF  
POLLUTION CONTROL & ECOLOGY  
8001 NATIONAL DRIVE  
P. O. BOX 8913  
LITTLE ROCK, AR 72219-8913

**Cedar Chemical Corporation  
West Helena Plant  
Response to Comments**

<b>Comment</b>	<b>Response</b>
1	All adjacent landowners appear to be identified in Figure 2.3, please identify any adjacent properties whose owners have not been identified.
2	Figure 2.1 includes all drainage features and patterns for the site and identifies the two NPDES outfalls for the site. As noted in Figure 2.1 the Cedar Chemical facility is not in a 100 year flood plain.
3	The active wastewater piping is shown in Figure 2.1 and the leaking pipe referenced in the comments was removed in September 1991 and reported to the ADPC&E and the location has been added to the site diagram. One inactive line still exists and will be identified in Figure 2.1.
4	Three monitoring wells installed in the early 1970's have been identified in the vicinity of the biological treatment ponds and a production well formerly used to provide process water has also been identified. These wells will be added to Figure 2.1 and closure of the wells will be included in the FIWP.
5	A request has been submitted to the USGS for all available geological maps for the West Helena area. If a better map is obtained from the USGS it will be included in the report in place of the map already in the report.
6	Table 2.1 is the product of an in-depth audit of all available information on past and present operations at the Cedar Chemical facility. It lists the processes, the waste generated, and how they are disposed. Table 2.2 gives a history of all hazardous waste disposal conducted at the facility based upon the same audit. Detailed analysis of waste streams is not available since most hazardous waste streams are declared hazardous by knowledge of process which is allowed under 40 CFR 261 Subpart B. Limited information on some of the past processes that was submitted to ADPC&E under the previous CAO can be included in the report.
7	Table 2.1 lists all chemicals involved in each process stream and the final products. The chemical and physical properties of each substance that has been used at the facility can be found in the volumes of MSDSs maintained at the facility; however, we feel this is beyond the scope of work since there is no evidence that a release of most of these chemicals has occurred.
8	There appears to be an error in the Sorrells report. Table GA-7 shows an effluent sample with a single flash at 104 degrees while a summary table in the



same report shows the single flash occurring on a sediment sample which would account for the report citing 40 CFR 261.21(a)(1). There were no concerns on this matter when the Sorrells report was submitted as part of the first CAO, but if the ADPC&E is concerned about the possibility of D001 hazardous waste being disposed of in the biological treatment ponds then a sample of the unit in question will be collected as part of the FIWP and analyzed for flash point.

9 See Comment 8.

10 We assume the intentional disposal of pesticides mentioned in the comments relates to activities at the site when it was controlled by the Ansul Company in 1971-72. Since the disposal occurred 20 years ago it is unlikely that volatile carriers still exist at the surface.

11 As specified in the NPDES permit, storm water runoff samples are analyzed for Total Pesticides which will detect the presence of dinoseb as well as propanil.

12 Cedar Chemical has two hazardous waste storage tanks on the site. Any noncompliances with the requirements in 40 CFR 265 Subpart J will be included in the report.

13 Table 2.1 lists all processes in which hazardous waste is generated. Information concerning processes generating solid waste at the facility will also be included as well as copies of annual reports and manifest summaries for the last 3 years.

14 Cedar Chemical Corporation's attorney can summarize the information obtained from the depositions and submit it to the ADPC&E; however, some of the information is considered confidential by Wormald Corporation and is secured under a protective agreement.

15 See Comment 5.

16 We do not recall agreeing to include a discussion of all SWMU's since the RFA conducted by EPA includes a discussion of all SWMU's and gives justifications for not investigating the SWMU's not included in the Preliminary Report. The facility concurs with the conclusions of the RFA.

17 The facility would like to discuss ADPC&E's reasons for including several of these units as SWMU's since they have never been associated with solid waste or are already part of a SWMU being investigated.

18 If no data is available on the waste streams, this task will be included in the FIWP.

19

The monitoring wells were installed as part of the previous CAO and were approved by the ADPC&E in order to successfully fulfill the requirements of the previous CAO. The facility is reviewing archived records and will contact the company that installed the monitoring wells to determine if construction documentation exists. Since the wells were approved as part of the previous CAO, we do not feel that it is necessary to replace the wells due to the lack of construction diagrams.



# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

July 29, 1992

Mr. Randal K. Oberlag, P.E.  
Enforcement Engineer  
NPDES Enforcement Section  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Cedar Chemical NPDES Response

Dear Mr. Oberlag:

In response to the July 22 meeting concerning COD/pH violations at the Cedar Chemical Corporation, West Helena facility, we are providing notification of our willingness to enter into a Consent Administrative Order (CAO) with the Arkansas Department of Pollution Control & Ecology (ADPC&E) in order to address these violations at outfall 001.

Currently, a Corrective Action Plan (CAP) is being developed to address this topic. It will be submitted at a later date as a requirement of the CAO. Cedar's legal counsel has contacted the ADPC&E legal department in order to understand whether this CAO can be entered as an addendum to the CAO under which we are currently operating (No. LIS 91-118 issued in July 1991). CAO LIS 91-118 requires assessment and remediation of Solid Waste Management Units (SWMUs) that we feel are contributing to the problems at outfall 001. It has been recommended by the ADPC&E Hazardous Waste Enforcement Division that outfalls 001 and 002 be listed as SWMUs.

Cedar is involved in an ongoing Toxicity Reduction Evaluation (TRE) approved by ADPC&E on April 1, 1992. Although the purpose of the TRE is to address biomonitoring at outfall 001, we feel that it could be broadened to include the CAP for COD/pH. Since there appears to be overlap between the TRE, the CAP and the CAO, Cedar suggests that further coordination of the programs is required which could be formalized by the CAO.

The CAP will also take into consideration the effect of corrective measures at 001 on Cedar's only other NPDES outfall, 002. Outfall 002 is the discharge from the biotreatment system into the Mississippi River.



SUMMARY OF INVESTIGATIONS AND CORRECTIVE ACTIONS  
RELATED TO OUTFALL 001  
BUT  
NOT INCLUDING TASKS DIRECTED BY CURRENT CAO

NON-CAPITAL EXPENDITURES

1. October 1991 to April 1992 - Removed three accumulations of buried drums and the associated contaminated soil. Cost - \$1,800,000.
2. February 1992 - Conductivity survey of plant site to determine if other accumulations of buried drums were present. Cost - \$16,800
3. February 1992 - API separator and pad at treatment system cleaned, and soil containing spilled material dug up. Cost - \$2,700
4. March 1992 - Began introduction of Phenol fighting micro-organisms into treatment system in order to allow for higher discharge rate at 002 so we could capture more stormwater. Cost - \$4,600 to date
5. March 1992 - Consultant contracted to perform TRE. Cost plus anticipated bioassay costs exclusive of TIE - \$35,000
6. March 1992 - Began six-month plan to dispose of accumulated, non-hazardous waste drums. Cost - \$165,000
7. March 1992 - Under the guidance of the CAO, requested permission to remove visibly contaminated soil and send to Subtitle C landfill. Request denied by Hazardous Waste enforcement.
8. April 1992 - Modified sampling techniques at outfall 001 to give a more representative sample.
9. April 1992 - Changed to Entek Laboratories for our bioassays, even though they were considerably more expensive, because they were certified by ADPC&E.
10. July 1992 - Repositioned aerators and flow lines in biotreatment system to maximize activity. Cost - 40 manhours
11. Ongoing efforts to improve housekeeping by changing maintenance equipment cleaning methods, laboratory waste collection and drum management, all of which contribute to contamination at outfall 001. Two employees are assigned full-time to these tasks and to maintenance of the stormwater system.

NON-CAPITAL EXPENDITURES OCTOBER 1991 TO PRESENT - \$2,024,900



CAPITAL EXPENDITURES

1. September 1991 - Removed several hundred feet of transite pipe believed to be leaking process waste, destined for the treatment system, into the stormwater sump and area around outfall 001. Cost - \$600 equipment rental plus 30 manhours of labor
2. February 1992 - Excavation work to redirect flows in stormwater system. Cost - \$3,060
3. February 1992 - Gutter installed around API separator at treatment system to prevent overflow. Cost - \$900
4. February 1992 - Installed replacement flowmeters at influent and effluent ends of treatment system because of unreliability of old units. Cost - \$6,400
5. April 1992 - Enlarged stormwater sump. Cost - \$1,500
6. April 1992 - Reworked stormwater drainage system by enlarging and cleaning out ditches. Cost - \$2,000
7. June 1992 - Re-lined sump at drum staging area because believed leaking. Cost - \$7,200
8. July 1992 - Captured boiler blowdown that normally went into stormwater ditch and redirected it to treatment system. Cost - \$18,000
9. Construct a drum management area with secondary containment and shelter area. Cost - \$12,000
10. An inspection of the API separator at the treatment system determined that it is not operating to its full potential, so we are budgeting a new unit for 1993. Cost - \$50,000

CAPITAL EXPENDITURES COMPLETED OR PLANNED - \$105,260



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-4632



Certified Mail Return Receipt No. P 762 177 232

July 13, 1992

Mr. John Wagner  
Cedar Chemical Corporation  
P.O. Box 2749  
West Helena, Ar 72390

RE: Report of Current Conditions and Workplan  
Notice of Deficiencies

Dear Mr. Wagner:

The Department reviewed the Report of Current Conditions and determined the plan to be incomplete. The deficiencies are listed in the attached Notice of Deficiencies (N.O.D.).

In order for the Department to proceed with the review of the Report of Current Conditions, the revised report (3 copies) must be received within thirty (30) days of the receipt of this letter. Please send the plans to the Hazardous Waste Division to the attention of Joe Hoover. If the revised plan is inadequate for approval upon resubmittal, it will be modified, if possible, and public noticed for approval.

Sincerely,

Joe Hoover  
Enforcement Administrator  
Hazardous Waste Division

CSN 54-0068  
PERMIT NO #.....  
HAZARDOUS WASTE-SORT:  
PERMIT/COMPLIANCE/SUPERFUNDS

cc: Mike Bates, Chief, HWD  
Phillip Murphy, HWD  
Jerry Williams, HWD  
David Hartley, HWD  
Allen T. Malone, Apperson, Crump, Duzane & Maxwell

PWM;cedarresnod

enclosure



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
July 10, 1992

Maps

1. Figure 2.3 does not identify all adjacent property owners, as previously requested.
2. A surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns, and NPDES outfalls has not been submitted as previously requested.
3. Figure 2.1 does not show all piping as previously requested. All wastewater piping from all production units, sumps, etc. must be shown. This must include all active and inactive systems which are present. Include the inactive line that was determined to be leaking near the storm water pond, as reported to NPDES.
4. Figure 2.1 does not show all known wells as previously requested. At least one previous production well is known to exist, as well as a previous monitoring well system at the biological treatment system are known to exist at the facility. These wells are recommended for plugging and abandonment as a task in the FIWP.
5. The regional geologic maps to support regional geologic units at the facility were not submitted as previously requested.

2.2 Site History

6. The facility was requested to submit information on all products produced at the facility during the active life of the facility, including all solid wastes generated from each process and the disposal methods for each of these wastes. Detailed analysis of each waste stream was to be submitted for review, which apparently is unavailable according to the report. Table 2.1 was submitted in response to this request. However, an adequate amount of detail has not been presented. Historic production apparently is not included. All waste streams have not been identified. If a particular waste stream is not generated, it should state so. Wastes reported such as volatile organic compounds or solvent is inappropriate and must reflect the actual compounds of the waste. The facility has failed to disclose all waste streams and the disposition of disposal methods. Scrubber liquor from each process must be accounted for, as a waste stream, and the method of disposal must be disclosed. Each waste stream must disclose the method and place of disposal, including non-hazardous wastes. If analysis of these waste streams are unavailable, I recommend that sampling and analysis of all waste influent into the treatment system and any other solid wastes be included as a task in the FIWP. The facility must include API separator sludge and any other treatment sludges in this description.



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
July 10, 1992

7. A detailed list of all raw materials, intermediate products, and finished products was not submitted as previously requested. All available chemical and physical properties of each substance is to be included. This will establish compounds of interest and how to investigate for these compounds in their various phases in the media likely to contain the compounds.
8. In Table GA-7, the water sample for the discharge pipe from the aeration pond shows a flash point of 104°F. The regulatory cite of 40 CFR 261.21 (a)(2) is for solids and this sample is obviously a liquid. It appears Cedar is treating D001 hazardous waste in the aeration pond according to 40 CFR 261.21 (a)(1).
9. Since a sample of water from the aeration pond has a flash point of 140°F, the air release pathway is a significant threat and must be included in the investigation.
10. It is stated in the report that there is evidence of intentional disposal of pesticides on the ground. Since many of carriers for the pesticides are volatile chemicals, the air pathway could have a significant impact.
11. It must be noted the parameters specified in the NPDES permit will not detect the presence of dinoseb in the storm water runoff.

Section 2.2 Solid and Hazardous Waste

12. The facility has failed to adequately describe RCRA activities as previously requested. The facility must provide information on RCRA storage in tanks with enough detail to demonstrate compliance with 40 CFR 265 Subpart J. Ninety day storage limit does not exempt the facility from these requirements. Any deficiencies noted are recommended as a task in the FIWP.
13. Table 2.2 fails to identify all specific processes in which hazardous waste is generated as previously requested. The facility was also required to list all solid wastes generated including volume, process, and disposition of disposal.
14. It is stated that Cedar officials obtained depositions from individuals who worked at the facility prior to Cedar's purchase of the facility. It would be beneficial to this project if Cedar would disclose this vital information.

Section 2.3.2 Regional Geology

15. This section of the report is not supported with the regional maps as previously requested. The Department is not claiming that the



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
July 10, 1992

information submitted is wrong; however, published references merely reinforce the interpretation. This information must be submitted.

### 3.2 Possible Sources of Contamination

16. The facility agreed, in the meeting regarding the NOD, to provide discussion of all SWMU's and to rationalize whether or not to investigate each of the units. The facility has failed to accomplish this and only proposed the same thirteen SWMU's identified in the RFA as having a strong potential for releases. Each SWMU must be addressed. A valid reason must be stated for not investigating each SWMU.
17. Addition of the following to the list of SWMU's is recommended:
  - A. Vacant lot adjacent to the biological treatment system.
  - B. NPDES outfall #1 (drainage ditch).
  - C. NPDES outfall #2 (piping from treatment ponds to Mississippi river).
  - D. Piping influent to the treatment ponds from production units.
  - E. Leaking pipe near storm water pond reported to NPDES.
  - F. Discharge area from API separator into an unnamed ditch.
  - G. Tank located near compressor house at treatment ponds, identified by ADPC&E during the 12-11-91, site visit.
  - H. The off-site surface drainage ditches
  - I. Concrete sumps and ditches in the production area
  - J. Soils around storm water pond
  - K. Underground piping from process area to waste water treatment area

### Appendix A Waste Analytical Data

18. The Department is concerned that Cedar has only done analysis on one waste stream, which is non-hazardous. There are many waste streams at the facility that Cedar is classifying as non-hazardous, apparently by knowledge of process. The Department recommends that a comprehensive investigation of all waste streams be done as a task in the FIWP. At a minimum, each of the non-hazardous waste streams should be screened for TC constituents. The biological treatment system was withdrawn from interim status and cannot receive hazardous waste.

### Appendix B Monitoring Well Construction Information

19. Construction documentation for the monitoring wells was requested, but is not presented. Cedar states that they do not have this documentation. This information must be presented to consider future uses of the wells, or the wells will have to be replaced.



# ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

## MEMORANDUM

TO : Joe Hoover, Enforcement Branch Manager, HWD

THROUGH : Jim Rigg, Ground Water Branch Manager, HWD

FROM : David Hartley, Senior Geologist Ground Water Branch, HWD DH

DATE : July 8, 1992

SUBJECT : Cedar Chemical Corporation (CCC)  
CAO LIS# 91-118  
Facility Investigation Preliminary Report (FIPR)  
April 1992, Response to NOD

=====

I have reviewed the referenced document, which was submitted in response to the February 10, 1992, NOD. These comments are for your consideration in the issuance of a second NOD. Some of the deficiencies noted were addressed in the first NOD and remain inadequate for the development of the Facility Investigation Work Plan (FIWP). These are referenced to the corresponding section of the FIPR.

### Maps

1. Figure 2.3 does not identify all adjacent property owners, as previously requested.
2. A surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns, and NPDES outfalls has not been submitted as previously requested.
3. Figure 2.1 does not show all piping as previously requested. All wastewater piping from all production units, sumps, etc. must be shown. This must include all active and inactive systems which are present. Include the inactive line that was determined to be leaking near the storm water pond, as reported to NPDES.
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5. The regional geologic maps to support regional geologic units at the facility were not submitted as previously requested.



## 2.2 Site History

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2. A detailed list of all raw materials, intermediate products, and finished products was not submitted as previously requested. All available chemical and physical properties of each substance is to be included. This will establish compounds of interest and how to investigate for these compounds in their various phases in the various media likely to contain the compounds.

### Section 2.2 Solid and Hazardous Waste

1. The facility has failed to adequately describe RCRA activities as previously requested. The facility must provide information on RCRA storage in tanks with enough detail to demonstrate compliance with 40 CFR 265 Subpart J. Ninety day storage does not exempt the facility from these requirements. Any deficiencies noted are recommended as a task in the FIWP.
2. Table 2.2 fails to identify all specific processes in which hazardous waste is generated as previously requested. The facility was also required to list all solid wastes generated including volume, process, and disposition of disposal.
3. It is stated that CCC officials obtained depositions from individuals who worked at the facility prior to CCC's purchase of the facility. It would be beneficial to this project if CCC would disclose this vital information.



### Section 2.3.2 Regional Geology

1. This section of the report is not supported with the regional maps as previously requested. I am not disputing that the information submitted is wrong, however, published references merely reinforce the interpretations that are made. This information must be submitted.

### 3.2 Possible Sources of Contamination

1. The facility agreed, in the meeting regarding the NOD, to provide discussion of all SWMU's and to rationalize whether or not to investigate each of the units. The facility has failed to accomplish this and only proposed the same thirteen SWMU's identified in the RFA as having a strong potential for releases. Each SWMU must be addressed. A valid reason must be stated for not investigating each SWMU.
2. Addition of the following to the list of SWMU's is recommended:
  - a. Vacant lot adjacent to the biological treatment system.
  - b. NPDES outfall #1 (drainage ditch).
  - c. NPDES outfall #2 (piping from treatment ponds to Mississippi river).
  - d. Piping influent to the treatment ponds from production units.
  - e. Leaking pipe near stormwater pond reported to NPDES.
  - f. Discharge area from API separator into an unnamed ditch.
  - g. Tank located near compressor house at treatment ponds, identified by ADPC&E during the 12-11-91, site visit.

### Appendix A Waste Analytical Data

1. I am very much concerned that CCC has only done analysis on one waste stream, which is non hazardous. There are many waste streams at the facility that CCC is classifying as non-hazardous, apparently by knowledge of process. I am recommending that a comprehensive investigation of all waste streams be done as a task in the FIWP. At a minimum, each of the non-hazardous waste streams should be screened for TC constituents. The biological treatment system was withdrawn from interim status and cannot receive hazardous waste.

### Appendix B Monitoring Well Construction Information

1. Construction documentation for the monitoring wells was requested, but is not presented. CCC states that they do not have this documentation. This information must be presented to consider future uses of the wells, or the wells will have to be replaced.

CCCPR

cc: Phillip Murphy



June 30, 1992

**CEDAR CHEMICAL CORPORATION**

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390

(501) 572-3701 • Fax No. 501-572-3795

Mr. Joe Hoover  
Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
Little Rock, AR 72219-8913

Re: Facility Investigation Progress Report - Second Quarter 1992

Dear Joe:

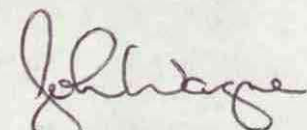
In accordance with Consent Administrative Order (CAO) LIS 91-118, Task V:B of the Scope of Work for a Facility Investigation, this progress report is submitted for the second quarter of 1992.

Subsequent to a meeting between Cedar Chemical, Ensafé and PC&E last quarter, the revised Facility Investigation Preliminary Report was submitted to PC&E on April 13.

No further effort has been able to be expended by Cedar until PC&E's review of this report is completed.

Future quarterly progress reports required by the CAO will be submitted within thirty days following the end of each quarter.

Sincerely,



John Wagner

cc: Ms. Pat Crossley  
Mr. Allen Malone

CERTIFICATE BOND

25% COTTON FIBER

Joe

**To:** Chuck Bennett, Water Division

**Through:** Jerry Williams *22*  
Mike Bates *MB*  
Joe Hoover *JH*  
David Hartley *DH*  
Nat Nehus

**From:** Phillip Murphy *PM*

**Date:** June 25, 1992

**Regarding:** Cedar Chemical NPDES Permit

Cedar Chemical Company (Cedar) operates a organic chemical manufacturing facility in West Helena, Arkansas. Cedar Chemical is in the process of doing remedial facility investigation (RFI) for the hazardous waste division in response to a CAO.

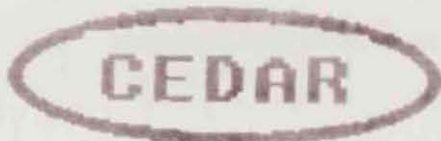
There is strong evidence that the previous owners of Cedar intentionally disposed of dinoseb (2-sec-butyl-4,6-dinitrophenol) by dumping the contents of drums directly upon the ground. Dinoseb was used as a herbicide prior to being banned for toxicity by EPA. The salts of dinoseb cause the ground to be colored a bright yellow. There is evidence of yellow staining on much of the ground at the Cedar site. According to a letter from Joe Porter to the Department, Cedar attempted to reduce the run-off of dinoseb by backfilling areas of the plant with heavy staining.

There is little data available for toxicity limits for dinoseb. EPA issued a life time health advisory for drinking water at 7  $\mu\text{g/l}$ . The LD 50 for dinoseb is 27 mg/kg for rats. According to Cedar, the normal storm water run-off has a concentration of 8 to 12 mg/l dinoseb.

According to Dick Cassett, the analytical method used by Cedar to detect the total pesticide in Outfall 001 is not capable of detecting dinoseb. The analytical method detects the chlorinated pesticides and some of the organophosphates. Analysis for dinoseb is not required on Form 2c.



Joe  
34  
JUN 08 1992



Chemical Corporation

P.O. Box 2749  
West Helena, AR 72398  
Voice: 501-572-3701  
Fax: 501-572-3795

To: Hazardous Waste Div From: John W. Wainwright  
Attn: Joe Hoover Date: 8 Jun 92  
Fax: \_\_\_\_\_ Pages: 2 + Cover  
Message: \_\_\_\_\_

## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3785

Jun 8, 1992

Mr. Joe Hoover  
Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Facility Investigation Preliminary Report Submission

Dear Joe:

Enclosed is the Federal Express receipt showing delivery of our Facility Investigation Preliminary Report to PC&E on 4/13/92. If you need more information or additional copies let me know.

Sincerely,



John Wagner



**FEDERAL**  
**EXPRESS**

 BILL TO: ENVIRONMENTAL & SAFETY DESIGNS  
 5724 SUMMER TREES DR  
 MEMPHIS, TN 38134

## SENDER ACTIVITY SUMMARY

 INVOICE NO. 4-424-16051 ACCOUNT NO. 0380-2616-0  
 PAGE 9 OF 11  
 DATE 04/16/92

TRACKING NO. REFERENCE	SENDER'S NAME AND ADDRESS	RECIPIENT INFORMATION AND PROOF OF DELIVERY	PACKAGES & WEIGHT	SERVICES	CHARGES	NET CHARGES
2347437514	JEFF BENNETT ENVIRONMENTAL & SAFETY DESIGNS 5724 SUMMER TREES DR MEMPHIS, TN 38134	PAT CROSSLEY ARIZONA DEPT OF POLLUTION CO 8001 NATIONAL DRIVE LITTLE ROCK, AR 72219 AA DELIVERED 04/13/92 08:39 SIGNED: L. ERSON	1/ 13	PRIORITY PKG DISCOUNT	50.00 -4.00	46.00
2362-003						
37820381	1 SHIPPED 04/10/92					
SENDER SUBTOTAL			1,075.50	CONTINUED NEXT PAGE		

QUESTIONS? CALL OUR BILLING SERVICE CENTER 800-622-1147, T&M - 6PM (CST) MONDAY - FRIDAY IN MEMPHIS, TN, CALL 901-387-2000.  
 TO ENSURE PROPER CREDIT PLEASE RETURN THE REMITTANCE ADVICE (1ST PAGE OF THIS INVOICE) WITH YOUR PAYMENT.  
 MAIL TO: FEDERAL EXPRESS CORP., P.O. BOX 1140, DEPT. A, MEMPHIS, TN 38101 - 1140

Form 394149-997

Post-Net brand fax transmittal memo 7571		# of pages	1
To John Wagner	From Jeff Bennett		
En Cedar Chemical	Co. EnSafe		
Dept.	Phone #		
Fax # 501-572-8795	Fax #		

 08-08-92 11:07AM FROM CEAR CHEMICAL CORP TO 15624832  
 RTR 1003 MSG 11 28-90-1874 TELDT

P003/003

STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-7444  
FAX: (501) 562-4632

May 15, 1992

Wormald U. S., Inc.  
c/o Corporation Trust Co.  
1209 Orange  
Wilmington, DE 19801

Re: Cedar Chemical Company Site; West Helena, Arkansas

Dear Sirs:

A chemical manufacturing facility in West Helena, Arkansas that is currently owned and operated by Cedar Chemical Corporation ("the Site") is the subject of remedial actions to remove hazardous substances, including hazardous substances related to the manufacture and disposal of dinitrobutylphenol ("dinoseb") at the plant site. These remedial actions are being taken by the current owner, Cedar Chemical Corporation, pursuant to a consent administrative order and an amended consent administrative order issued under the Arkansas Hazardous Substance Remedial Action Trust Fund Act ("ARATFA"). In the Matter of: Cedar Chemical Corporation, West Helena, Arkansas, No. LIS 91-118.

The Department has received information which indicates that Wormald U. S., Inc., as successor to The Ansul Company, is a person liable for costs of remedial actions at the Site under ARATFA, ACA §8-7-512. Pursuant to authority granted the Department under ACA §8-7-511(a), the Department requests Wormald U.S., Inc. to furnish the following information within thirty (30) days from the date of this letter:

1. Identify all past and present relationships between and among Wormald U.S., Inc., The Ansul Company and/or Eagle River Chemical Corporation.
2. Identify all persons known to you who may have knowledge, information or documents about the generation, use, storage, disposal or handling of dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums at the Site.
3. Identify all persons, including employees, agents or contractors of Wormald U.S., Inc., The Ansul Company or Eagle River



Wormald U.S., Inc.

May 15, 1992

Page 2

Chemical Corporation who may have disposed of or arranged for the disposal of dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums at the Site.

4. Did Wormald U.S., Inc., The Ansul Company or Eagle River Chemical Corporation dispose of dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums at any place in Arkansas other than the Site?

5. If the answer to question no. 4 above is yes, identify all places in Arkansas other than the Site where Wormald U.S., Inc., The Ansul Company or Eagle River Chemical Corporation disposed of dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums and for each such disposal, identify the date(s) of the disposal and the transporter(s) used to transport the dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums to the other Arkansas disposal site.

6. Identify, as precisely as possible, any and all of the locations at the Site at which Wormald U.S., Inc., The Ansul Company or Eagle River Chemical Corporation disposed of dinoseb, drums containing dinoseb, waste containing dinoseb or crushed drums.

7. Do you know the final disposition of all dinoseb manufactured at the Site during the period the Site was managed or controlled by The Ansul Company or Eagle River Chemical Corporation, including all dinoseb or other substances acquired from Eagle River Chemical Corporation by The Ansul Company? If so, describe in detail, including the dates and places of, all final dispositions.

8. Do you know if any containers containing dinoseb were disposed of at the Site? If so, describe the type, condition and number of containers in which dinoseb was contained when it was disposed of at the Site, including, if possible, any labels, numbers or other markings on the containers.

9. Do you know if any containers containing dinoseb were disposed of at any place in Arkansas other than the Site? If so, describe the type, condition and number of containers in which dinoseb was contained when it was disposed of at places in Arkansas other than the Site, including, if possible, any labels, numbers or other markings on the containers.

10. Provide all documents which support any of your responses to questions nos. 1 through 9.

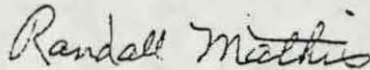
Wormald U.S., Inc.  
May 15, 1992  
Page 3

Please be advised that you are required by ARATFA to provide the information requested herein. Violations of the Act are punishable by civil penalties up to twenty-five thousand dollars (\$25,000) per day for each day of any violation as well as criminal prosecution.

Information and documents provided in response to this letter must be delivered to Arkansas Department of Pollution Control and Ecology within thirty (30) days from the date of this letter and should be delivered to:

Anne Roberts Bobo  
Attorney  
Arkansas Department of Pollution Control  
and Ecology  
P. O. Box 8913  
Little Rock, Arkansas 72219

Sincerely,



Randall Mathis  
Director

RM/AB/pn

cc: Mr. Peter Flemister, Esq.  
Allied Tube & Conduit Company  
16100 Lanthrop Avenue  
Harvey, IL 60624



Exhibit A

Facility Investigation (FI)

Corrective Measure Study (CMS)

Scope of Work

SCOPE OF WORK FOR A FACILITY INVESTIGATION (FI)  
AT

PURPOSE

The purpose of this Facility Investigation is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and to gather all necessary data to support the Corrective Measures Study. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the remedial investigation at the site.

SCOPE

The Facility Investigation consists of five tasks:

Task I: Description of Current Conditions

- A. Facility Background
- B. Nature and Extent of Contamination

Task II: FI Workplan Requirements

- A. Data Collection Quality Assurance Plan
- B. Data Management Plan
- C. Health and Safety Plan
- D. Community Relations Plan

Task III: Facility Investigation

- A. Environmental Setting
- B. Source Characterization
- C. Contaminations Characterization
- D. Potential Receptor Identification

Task IV: Investigation Analysis

- A. Data Analysis
- B. Protection Standards

Task V: Reports

- A. Preliminary and Workplan
- B. Progress
- C. Draft and Final

Task I: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to the ADPC&E for approval, a report providing the background information pertinent to the facility, contamination and any type of on-going corrective action as set forth below. Information from existing reports and studies is acceptable for any requirement in this Order as long as the source of this information is documented and it is pertinent and reflective of current conditions, and meets the format for the FI investigations.



A. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

1. Separate maps depicting the following:
  - a. General geographic location;
  - b. Property lines, with the owners of all adjacent property clearly indicated;
  - c. Surface drainage (with a contour interval of five (5) feet and a scale of 1 inch = 100 feet), depicting all wetlands, floodplains, water features, natural drainage patterns and respective drainage areas, manmade drainage pathways (berms, drains, etc.), NPDES outfalls, etc., and a description of all types of containment (natural and manmade).
  - d. All tanks, buildings, utilities, pave areas, easements, right-of-way, and other features;
  - e. All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
  - f. All known past solid or hazardous waste treatment, storage or disposal areas (e.g., tanks, impoundments, landfill, etc.) regardless of whether they were active on November 19, 1980;
  - g. All known past and present product and waste underground tanks or piping;
  - h. Surrounding land uses (residential, commercial, agricultural, recreational); and
  - i. Surrounding water uses (recreational, agricultural, industrial, etc.)
  - j. The location of all production wells, groundwater monitoring wells, and piezometers. These wells shall be clearly labeled and ground and top of casing elevations, construction details, and techniques included (these elevations and details may be included as an attachment).
  - k. Location, date and type of material spilled at the facility site which will reflect the information submitted for number 3 below.

All maps shall be consistent with the requirements set forth in 40 CFR 270.14 and be of sufficient detail and accuracy to locate and report all current and future work performed at the site;

2. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;
3. Approximate dates or periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or federal response units or private parties), including any inspection reports or technical reports generated as a result of the response; and
4. A summary of past environmental permits requested and/or received, any enforcement actions and their subsequent response, including a list of documents and studies submitted.
5. The Respondent shall submit a compilation of all historical groundwater and surface discharge analytical data for the purposes of review by ADPC&E. The Respondent shall submit the required summary within ninety (90) calendar days after the effective date of the order.
6. The Respondent shall document and report on all interim measures which were or are being undertaken at the facility other than those specified in the order. This shall include:
  - a. Objectives of the interim measures: How the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long term solution at the facility;
  - b. Design, construction, operation, and maintenance requirements;
  - c. Schedules for design, construction and monitoring; and
  - d. Schedules for progress reports.
7. The Respondent must provide a reference of all environmental permits, applied for and/or received, the purpose of the permit, and a short summary of the requirements.
8. The Respondent shall submit analytical results for all Appendix IX constituents and water wells for all existing groundwater monitoring wells..

B. Nature and Extent of Contamination

The Respondent's report shall include a description of the existing information on the nature and extent of contamination. The Respondent's report will include a description of the existing information.



1. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following.
  - a. Location of unit/area (which shall be depicted on a facility map);
  - b. Quantities of solid and hazardous wastes;
  - c. Hazardous waste or constituents, to the extent known; and
  - d. Identification of areas where additional information is necessary.
2. The Respondent shall prepare a preliminary assessment and description of the existing degree and extent of contamination. This should include:
  - a. Available monitoring data and qualitative information on locations and levels of contamination at the facility;
  - b. All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
  - c. The potential impact(s) on human health and the environment, including demography, groundwater and surface-water use, and land use.

#### TASK II: FIWP REQUIREMENTS

The Respondent shall prepare a Facility Investigation Workplan (FIWP). This FI Workplan shall include the development of several plans, which shall be prepared concurrently. During the Facility Investigation, it may be necessary to revise the FIWP to increase or decrease the detail of information collected to accommodate the facility specific situation. The FIWP shall include the following:

##### A. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed at the facility during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

##### 1. Data Collection Strategy

The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

- a. Description of the intended uses for the data, and the necessary level of prevision and accuracy for these intended uses:
- b. Description of methods and procedures to be used to assess the revision, accuracy and completeness of the measurement data;

2. Sampling and Field Measurements

The Sampling Field Measurements Section of the Data Collection Quality Assurance Plan shall at least discuss:

- a. Selecting appropriate sampling and field measurements locations, depths, etc.;
- b. Providing a statistically sufficient number of sampling and field measurement sites;
- c. Determining conditions under which sampling or field measurements should be conducted;
- d. Determining which parameters are to be measured and where;
- e. Selecting the frequency of sampling and length of sampling period;
- f. Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- g. Measures to be taken to prevent contamination of sampling or field measurements equipment and cross contamination between sampling points;
- h. Documenting field sampling operations and procedures;
- i. Selecting appropriate sample containers;
- j. Sample preservation; and
- k. Chain-of-custody.

3. Sample Analysis

- a. Chain-of-custody procedures;
- b. Sample storage procedures and holding times;
- c. Sample preparation methods;
- d. Analytical procedures;
- e. Calibration procedures and frequency;



- f. Data reduction, validation and reporting; and
- g. Internal quality control checks, laboratory performance and systems audits and frequency.

B. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation, such as:

- 1. Data Record
- 2. Tabular Displays
- 3. Graphical Displays

C. Health and Safety Plan

The Respondent shall prepare a facility Health and Safety Plan.

- 1. Major elements of the Health and Safety Plan shall include;
  - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
  - b. Describe the known hazardous and evaluate the risks associated with the incident and with each activity conducted;
  - c. List key personnel and alternates responsible for site safety, responses operations, and for protection of public health;
  - d. Delineate work area;
  - e. Describe levels of protection to be worn by personnel in work area;
  - f. Establish procedures to control site access;
  - g. Describe decontamination procedures for personnel and equipment;
  - h. Establish procedures to control site access;
  - i. Describe decontamination procedures for personnel and equipment;
  - j. Establish site emergency procedures;
  - k. Address emergency medical care for injuries and toxicological problems;

1. Describe requirements for an environmental surveillance program;
  - m. Specify any routine and special training required for responders; and
  - n. Establish procedures for protecting worker from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
  - b. EPA Order 1440.1 - Respiratory Protection;
  - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
  - d. Approved Facility Contingency Plan;
  - e. EPA Standard Operating Safety Guide (1984);
  - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
  - g. State and local regulations; and
  - h. Other EPA guidance as provided.

D. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

E. Project Management Plan

The Permit shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and key project personnel. The Project Management Plan will also include a description of qualifications of key project personnel performing or directing the FI, including contractor personnel. This plan shall also document management approach to the Facility Investigation.

TASK III: FACILITY INVESTIGATION

The Respondent shall conduct those investigations of SWMUs previously identified with known or suspected releases of contamination as necessary to protect human health and the environment to: characterize the facility (Environmental Setting); define the source (Source Characterization); and identify actual or potential receptors.

Investigations should result in data of adequate technical quality to support the development and evaluation of the corrective measure alternative or alternatives during the Corrective Measures Study, when necessary.



The facility investigation activities shall when conducted follow the plans set forth in Task II. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map. Information from existing reports and studies is acceptable for any requirement in the order as long as the source of this information is documented and it is pertinent and reflective of current conditions, and meets the format for the RFI investigations.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the facility;
- b. An analysis of any topographic features that might influence the groundwater flow system. (Note; Stereographic analysis of aerial photographs may aid in this analysis).
- c. Based on field data, tests, (gamma and neutron logging of existing and new wells, piezometers and borings) and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units).
- d. Based on field studies and cores, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
  - i. Unconsolidated sand and gravel deposits
  - ii. Zones of fracturing or channeling in consolidated or unconsolidated deposits;
  - iii. Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant sources, a representative description of water level or fluid pressure monitoring.

- f. A description of manmade influences that may affect the hydrogeology of the site.

2. Soils

The Respondent shall conduct a program to characterize the soils and rock units above the water table in the vicinity of the contaminant release(s). Such characterization shall include, but not be limited to, the following information:

- a. Surface soil distribution;
- b. Soil profile, including ASTM classification of soils;
- c. Transects of soil stratigraphy;
- d. Saturated hydraulic conductivity;
- e. Porosity;
- f. Cation exchange capacity (CEC);
- g. Soil organic content;
- h. Soil pH;
- i. Particle size distribution;
- j. Depth of water table;
- k. Moisture content;
- l. Effect of stratification on unsaturated flow;
- m. Infiltration;
- n. Evapotranspiration;
- o. Residual concentration of contaminants in soil; and
- p. Mineral and metal content.

B. Source Characterization

The Respondent shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, including: type; quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e.g., facility security, and engineered barriers). This shall include quantification of the following specific characteristics, at each source area:

- 1. Unit/Disposal Area characteristics:
  - a. Location of unit/disposal area;



- b. Type of unit/disposal area;
- c. Design features;
- d. Operating practices (past and present);
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and
- h. Method used to close the unit/disposal area.

2. Waste Characteristics:

- a. Type of waste placed in the unit;
- b. Physical and chemical characteristics;
- c. Migration and dispersal characteristics of the waste;

The Respondent shall document the procedures used in making above determinations.

C. Contamination Characteristics

The Respondent shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination when necessary to characterize contamination from a SWMU. This data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identify of the individual(s) performing the sampling and analysis. The Respondent shall address the following types of contamination at the facility:

1. Groundwater Contamination

The Respondent shall conduct a Groundwater Investigation to characterize any plumes of contamination at the facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of any Appendix IX constituents in the plume(s);

- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation to characterize the contamination of the soil and rock units above the water table in the vicinity of the contaminant release. The investigation shall include the following information:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contaminant movement; and
- e. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations.

3. Surface Water Contamination

The Respondent shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from contaminant releases at the facility. The investigation shall include the following:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plumes originating from the facility, and the extent of contamination in the underlying sediments;
- b. The horizontal and vertical direction and velocity of contaminant movement;
- c. An evaluation of the physical, biological, and chemical factors influencing contaminant movement;
- d. An extrapolation of future contaminant movement; and
- e. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.



The Respondent shall document the procedures used in making the above determinations.

4. Air Contamination

The Respondent shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of the release; and
- c. The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

5. Subsurface Gas

The Respondent shall provide information characterizing the nature, rate and extent of releases of reactive gases from the units. Such information shall include, but not be limited to: provisions for monitoring subsurface gases released from the unit; and an assessment of the potential for these releases to have a threat to human health and environment.

The Respondent shall document the procedures used in making the above determination.

D. Potential Receptors

The Respondent shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems (e.g., stressed vegetation) may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of ground water:
  - a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and
  - b. Location of all ground water wells, names of current owners or tenants at those locations, and the current use of these wells within a one mile radius of the facility.
2. Local uses and possible future uses of surface waters within a 1.5-mile radius of the facility:
  - a. Domestic and municipal (e.g., potable and lawn/gardening watering);

- b. Recreational (e.g., swimming, fishing);
  - c. Agricultural;
  - d. Industrial; and
  - e. Environmental (e.g., fish and wildlife propagation).
3. Human use of or access to the facility and adjacent lands, including but not limited to:
- a. Recreation;
  - b. Hunting;
  - c. Residential;
  - d. Commercial;
  - e. Zoning; and
  - f. Relationship between population locations and prevailing wind direction.
4. A description of the biota in surface water bodies on, adjacent to, or affected by the facility.
5. A description of the ecology overlying and adjacent to the facility.
6. A demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age, sex; and sensitive subgroups.
7. A description of any endangered or threatened species near the facility.

#### TASK IV: INVESTIGATIVE ANALYSIS

The Respondent shall prepare an analysis and summary of all facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support the Corrective Measures Study, if one is required.

The Respondent shall analyze all facility investigation data outlined in Task II and prepare a report on the type and extent of contamination at the facility including sources and migration pathways. The report shall describe the contamination (qualitative/quantitative) in relation to the background levels indicative for the area.



For solid waste management units the Respondent shall provide information to support the ADPC&E selection/development of Ground Water Protection Standards for all of the Appendix IX constituents found in the ground water during the Facility Investigation (Task III), or other investigations required by the order.

The Respondent shall identify all relevant and applicable standards for the protection of human health and the environment (e.g., National Ambient Air Quality Standards, Federally-approved State water quality standards, ground water protection standards, etc.).

The Respondent shall identify any corrective measure which may be applicable to the site. This identification of preliminary corrective measure technologies shall be based on the analysis of all facility investigation data developed in Task II and other reports prepared pursuant to this Task IV.

TASK V: REPORTS

A. Preliminary and Workplan

The Respondent shall submit to ADPC&E the Preliminary Report (Task I) and the Facility Investigation Workplan (Task II) as described in the Order.

B. Progress

The Respondent shall at a minimum provide the ADPC&E with signed, quarterly progress reports containing:

1. A description and estimate of the percentage of the FI completed;
2. Summaries of all findings to date;
3. Summaries of all changes made in the FI during the reporting period;
4. Summaries of all contacts relating to environmental matters with representatives of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period; and
8. Projected work for the next reporting period.

C. Draft and Final

The FI Report shall be developed in draft form for the ADPC&E's review. The FI Report shall be developed in final format incorporating comments received on the Drafted FI Report.

Three (3) copies of all reports, including the Task I report, Task II workplan and both the Draft and Final FI Reports (Task III-IV) shall be

provided by the Respondent. One of the copies provided should be on a formatted computer disc.

Facility Submission Summary

A summary of the information reporting requirements contained in the Facility Investigation Scope of Work is presented below:

Facility Submission	Due Date*
Description of Current Situation (Task I)	90 days;
FI Workplan (Task II)	90 days;
Draft FI Report (Task III and IV)	60 days after completing FI;
Progress Reports on Task I through V and interim measures	Quarterly

\* All due dates are calculated from the effective date of the Order unless otherwise specified.



SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY (CMS)  
AT

PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate the corrective action alternative or alternatives and to recommend the corrective measures to be taken at the site. The Respondent will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified.

If the Respondent believes that certain requirements of the scope of work are not applicable, the specific requirements shall be identified and a detailed rationale for inapplicability shall be provided.

SCOPE

The Corrective Measure Study consists of four tasks:

Task VI: Identification and Development of the Corrective Measure Alternative or Alternatives

- A. Description of Current Situation
- B. Establishment of Corrective Action Objectives
- C. Laboratory and Bench-Scale Study
- D. Screening of Corrective Measures Technologies
- E. Identification of the Corrective Measure Alternative or Alternatives

Task VII: Evaluation of the Corrective Measure Alternative(s)

- A. Technical/Environmental/Human Health/Institutional
- B. Cost Estimate

Task VIII: Justification and Recommendation of the Corrective Measure or Measures

- A. Technical
- B. Human Health
- C. Environmental

Task IX: Reports

- A. Progress
- B. Draft
- C. Final

TASK VI: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVE OR ALTERNATIVES

Based on the results of the Facility Investigation (FI) and consideration of the identified Preliminary Corrective Measure Technologies (Task I) the Respondent shall identify, screen, and develop the alternative(s) for removal,



containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

The Respondent shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the FI report. The Respondent shall provide an update to information presented in Task I of the FI to ADPC&E regarding previous response activities and any interim measures which have or are being implemented at the facility. The Respondent shall also make a facility-specific statement of the purpose for the response, based on the results of the FI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

The Respondent, in conjunction with ADPC&E shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the Facility Investigation, EPA guidance and the requirements of any applicable Federal or Arkansas statutes. At a minimum, all corrective actions concerning groundwater releases from solid waste management units must be consistent with, and as stringent as, those required under 40 CFR 264.100.

C. Laboratory and Bench-Scale Study

When a new technology is being proposed or similar waste streams have not routinely been treated or disposed using the technology the Respondent shall conduct laboratory and/or bench-scale studies to determine the applicability of a corrective measure technology or technologies to the facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

The Respondent shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Respondent shall prepare a report summarizing the testing program and its results, both positive and negative.

D. Screening of Corrective Measure Technologies

The Respondent shall review the results of the FI and reassess the technologies which are applicable to the facility. The Respondent shall screen the preliminary corrective measure technologies identified in Task IV of the FI and any supplement technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to



perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations. Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations

The level of technology development, performance record, and inherent construction, operation and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

E. Identification of the Corrective Measure Alternatives

The Respondent shall develop the corrective measure alternatives based on the corrective measure objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task IV of the FI as supplemented following the preparation of the FI report. The Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of options that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task IV, as supplemented in the development of the alternative.

TASK VII: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE OR ALTERNATIVES

The Respondent shall describe each corrective measure alternative that passed the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical,



environmental, human health and institutional concerns. The Respondent shall also develop cost estimates for each corrective measure.

A. Technical/Environmental/Human Health/Institution

The Respondent shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Respondent shall evaluate each alternative in the four following areas:

1. Technical

The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

- a. The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:
  - i. Effectiveness shall be evaluated in terms of the ability to perform intended functions such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and
  - ii. Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.
- b. The Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:
  - i. Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The



availability of labor and materials to meet these requirements shall also be considered; and

- ii. Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- c. The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the total time required to achieve a given level of response:
  - i. Constructability is determined by conditions both internal and external to the facility conditions and includes such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). The Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities;
  - ii. Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.
- d. The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider include fire, explosion, and exposure to hazardous substances.

## 2. Environmental

The Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, and evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse impacts.

3. Human Health

The Respondent shall assess each alternative in terms of the extent which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or regulations acceptable to ADPC&E.

4. Institutional

The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. Cost Estimate

The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include capital, and operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (non-construction and overhead) costs.

a. Direct capital costs include:

- i. Construction costs: Cost of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure alternative.
- ii. Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is completed;
- iii. Land and site development costs: Expenses associated with purchase of land and development of existing property; and
- iv. Building and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.



b. Indirect capital costs include:

- i. Engineering expenses: Costs of administration, design construction supervision, drafting, and testing of corrective measure alternatives;
- ii. Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
- iii. Start-up and shakedown costs: Costs incurred during corrective measure start-up; and
- iv. Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Respondent shall consider the following operation and maintenance cost components:

- a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operation;
- b. Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
- c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
- d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
- e. Disposal and treatment: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues generated during operation;
- f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
- g. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

- h. Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- i. Other costs: Items that do not fit any of the above categories.

**TASK VIII. JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES**

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The ADPC&E will select the corrective measure alternative or alternatives to be implemented based on the results of Tasks VIII and IX. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

**A. Technical**

- 1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- 2. Reliability - corrective measure or measures which do not require frequency or complex operation and maintenance activities and have provided effective under waste and facility conditions similar to those anticipated will be given preference;
- 3. Implementability - corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- 4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

**B. Human Health**

The corrective measure or measures must comply with existing U.S. EPA and/or ADPC&E criteria, standards, or regulations for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

**C. Environmental**

The corrective measure or measures posing the least adverse impact (or greatest improvement) on the environment over the shortest period of time will be favored.



TASK IX: REPORTS

The Respondent shall prepare a Corrective Measure Study Report presenting the results of Tasks VII through IX recommending a corrective measure alternatives. Three (3) copies of the draft and final reports shall be provided to the ADPC&E by the Respondent. One of the copies provided shall be on a formatted computer disc.

A. Progress

The Respondent shall at a minimum provide the ADPC&E with signed quarterly progress reports containing:

1. A description and estimate of the percentage of the CMS completed;
2. Summaries of all findings;
3. Summaries of all changes made in the CMS during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
5. Actions being taken to rectify problems;
6. Changes in personnel during the reporting period;
7. Projected work for the next reporting period; and
8. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

B. Draft

The Report shall at a minimum include:

1. A summary of the corrective measure or measures and rationale
  - a. Description of the corrective measure or measures and rationale for selection;
  - b. Performance expectations;
  - c. Preliminary design criteria and rationale;
  - d. General operation and maintenance requirements;
  - e. Long-term monitoring requirements
2. Design and Implementation Precautions:
  - a. Special technical problems;
  - b. Additional engineering data required;

- c. Permits and regulatory requirements;
  - d. Access, easements, right-of-way;
  - e. Health and safety requirements; and
  - f. Community relations activities.
3. Costs Estimates and Schedules
- a. Capital cost estimate;
  - b. Operation and maintenance costs estimate; and
  - c. Project schedule (design, construction, operation).

C. Final

The Respondent shall finalize the Corrective Measure Study Report incorporating comments received from the ADPC&E on the Draft Corrective Measure Study Report.



CHARLES W. METCALF, 1840-1924  
WILLIAM P. METCALF, 1872-1940  
JOHN W. APPERSON, 1896-1995

LAW OFFICES  
APPERSON, CRUMP, DUZANE & MAXWELL

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ONE COMMERCE SQUARE  
MEMPHIS, TENNESSEE 38103  
901 / 525-1711  
TELECOPY 901 / 521-0789

EAST OFFICE:  
SUITE 100  
KIRBY CENTRE  
1755 KIRBY PARKWAY  
MEMPHIS, TENNESSEE 38120  
901 / 756-6300  
TELECOPY 901 / 757-1296

April 27, 1992

CHARLES METCALF CRUMP  
JERRE G. DUZANE  
JOHN B. MAXWELL, JR.  
ALLEN T. MALONE  
PHILIP G. KAMINSKY  
ROBERT L. DINKELSPIEL  
HENRY L. KLEIN  
ROSS B. CLARK II  
JAMES F. RUSSELL  
JOHN L. RYDER  
THOMAS R. BUCKNER  
BRUCE M. SMITH  
TONI CAMPBELL PARKER  
STEVEN N. DOUGLASS  
RANDY S. GARDNER  
KAREN R. WILLIAMS  
PATRICIA B. STEGEMANN  
ROBERT E. YORK  
ELIZABETH ANN CAMP

\*ALSO ADMITTED IN MISSISSIPPI  
\*\*ALSO ADMITTED IN NEW YORK  
\*\*\*ADMITTED ONLY IN PENNSYLVANIA

SAMUEL RUBENSTEIN  
OF COUNSEL

Mr. Steve Weaver  
Chief Legal Counsel  
Arkansas Department of Pollution  
Control & Ecology  
8001 National Drive  
Little Rock, Arkansas 72209

VIA FAX

Re: In the Matter of: Cedar Chemical Corporation  
West Helena, Arkansas, LIS 91-118

Dear Steve:

Confirming our telephone conversation of April 10, 1992, I believe it is a matter of some considerable importance that your Department notify Wormald U.S., Inc. (as the admitted successor to The Ansul Company) that it is a potentially responsible party for costs of remedial actions at the referenced site under RATFA, A.C.A. §8-7-512. The letter which Allan Gates drafted for your review one month ago is quite similar to letters which the Department sent to PRP's on the Frit Industries site as recently as last month.

As I believe you are aware, Cedar has expended in excess of \$1,800,000 in removing buried drums and soil contaminated with dinoseb, a pesticide which was only produced on West Helena Plant site in 1972 when it was controlled by Ansul. We have fully documented Ansul's management and control of the site during this period, including documents executed on behalf of Ansul; correspondence from Ansul's management personnel; and a deposition of the Ansul employee who served as Plant Manager on the site in 1972. Although Allan Gates reported that you felt that you had adequate evidence of Ansul's involvement without getting copies of any this documentation, we remain willing to make it available to you anytime you wish.

In the meantime, I would again ask that a letter similar to the one proposed by Allan Gates be submitted to Wormald by your office without further delay.

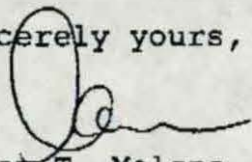


Mr. Steve Weaver  
April 27, 1992  
Page Two

In addition, you might want to issue a separate notice to Wormald's present parent company, Tyco Laboratories, Inc. We have determined that Tyco acquired Wormald after Cedar had notified Wormald of its contribution claim in this matter. We further understand that Tyco accomplished the acquisition by issuing its own shares in exchange for shares in Wormald. For these reasons, we believe that Tyco should be treated as the successor to Wormald and Ansul. Since it is apparent that it is Tyco's management (which now controls Wormald) who have decided to "stonewall" Cedar's efforts to obtain contributions, letter from you to Tyco's chairman might be of some assistance.

Cedar is an important employer in Phillips County and I think its commitment to act as a good corporate citizen in the State of Arkansas has been amply demonstrated by its cooperation with the Department in investigating and dealing with contamination which was caused by prior owners of its West Helena Plant. At this point, we would hope that you would provide the limited assistance requested above. To the extent that the assistance requested will help enable us to obtain Wormald's financial involvement in clean-up efforts under way at the West Helena Plant, Cedar's ability to implement any necessary corrective action at the facility, and to remain a viable employer in Phillips County, will be enhanced.

Sincerely yours,



Allen T. Malone

ATM:jw

cc: Mr. Allan Gates



ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

TO : JOE HOOVER, ENFORCEMENT BRANCH MANAGER, HWD  
THROUGH : DENNIS GREEN, INSPECTOR SUPERVISOR, HWD *DJL*  
FROM : PENNY J. WILSON, HAZARDOUS WASTE INSPECTOR, HWD *PJW*  
DATE : APRIL 13, 1992  
SUBJECT : CEDAR CHEMICAL, WEST HELENA, ARKANSAS

=====

On April 1, 1992, I visited the Cedar Chemical facility in West Helena, Arkansas to pick up split samples for the verification of clean-up of buried drums. According to Kevin Juneau, Project Manager for the ENRAC Division of Chemical Waste Management, this pit is 14' 6" deep. Three samples were taken from a center line in the pit: (1) West end of center line, (2) Middle of center line, and (3) East end of center line.

While at the facility, I observed that the soil below the surface within the pit was stained yellow. The stained area is approximately one foot below the surface and extends approximately three feet downward. (Refer to photographic log attached to this memo.)

CERTIFICATE BOND  
25% COTTON FIBER



## OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Cedar Chemical  
LOCATION: 3<sup>rd</sup> excavation pit, yellow  
stained area  
CITY: West Helena COUNTY: Phillips STATE: AR  
DATE: 4-1-92 TIME: 1045  
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.) Lenny F. Wilson  
WITNESS: \_\_\_\_\_  
CAMERA: Pentax K1000  
FILM TYPE: 35mm ASA: 200 T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: file FILE #: \_\_\_\_\_  
PROCESSED BY: Wal Mart  
PHOTO #: 1 of 3



## OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Cedar Chemical  
LOCATION: 3<sup>rd</sup> excavation pit, yellow  
stained area  
CITY: West Helena COUNTY: Phillips STATE: AR  
DATE: 4-1-92 TIME: 1046  
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.) Lenny F. Wilson  
WITNESS: \_\_\_\_\_  
CAMERA: Pentax K1000  
FILM TYPE: 35mm ASA: 200 T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: file FILE #: \_\_\_\_\_  
PROCESSED BY: Wal Mart  
PHOTO #: 2 of 3



## OFFICIAL PHOTOGRAPH

U.S. ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Cedar Chemical  
LOCATION: 3<sup>rd</sup> excavation pit, yellow  
stained area  
CITY: West Helena COUNTY: Phillips STATE: AR  
DATE: 4-1-92 TIME: 1047  
WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.) Lenny F. Wilson  
WITNESS: \_\_\_\_\_  
CAMERA: Pentax K1000  
FILM TYPE: 35mm ASA: 200 T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: file FILE #: \_\_\_\_\_  
PROCESSED BY: Wal Mart  
PHOTO #: 3 of 3





54

# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

326  
APR 02 1992

March 31, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: CAO LIS 91-118 (Amended), Buried Drum Removal and Disposal

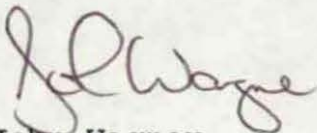
Dear Joe:

Enclosed is the manifest for twenty-one (21) dinoseb-contaminated overpack drums that were sent to ENSCO today for incineration. These drums represent the total that were removed from the second and third holes, and which still contained material. Approximately two hundred and fifty-five empty carcasses were sent off as debris with the soil.

For reference purposes, hole number one was the removal project accomplished in October and November of 1991. The first removal project (northwest anomaly on the Groundwater Services, Inc. conductivity survey) under the supplemental work plan is hole number two. Hole number three is the last of the accumulations identified on the survey (north central anomaly).

The generation dates for all twenty-one dinoseb-contaminated drums are between March 18 and March 29, 1992.

Sincerely,



John Wagner

cc: Mr. Allen Malone  
Ms. Pat Crossley





STATE OF ARKANSAS  
Department of Pollution Control and Ecology  
P. O. Box 8913 Little Rock, Arkansas 72219-8913  
Telephone 501-562-7444

6

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved, OMB No. 2050-0039 Expires 8/30/93

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of ONE	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address		CEDAR CHEMICAL CORPORATION P.O. BOX 2749-HWY 242 SOUTH WEST HELENA, AR 72390		A. State Manifest Document Number <b>AR-538302</b>		
4. Generator's Phone <b>501-572-3701</b>		6. US EPA ID Number		B. State Generator's ID <b>ARD990660649</b>		
5. Transporter 1 Company Name <b>LEE'S TRUCKING SERVICE</b>		8. US EPA ID Number <b>1A 1R 1D 19 18 11 15 11 13 13 18 15</b>		C. State Transporter's ID <b>PG 31126 H 338</b>		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <b>501-862-3477</b>		
9. Designated Facility Name and Site Address <b>ENSCO, INC. AMERICAN OIL ROAD EL DORADO, AR 71730</b>		10. US EPA ID Number <b>1A 1R 1D 10 16 19 17 14 18 11 19 12</b>		E. State Transporter's ID <b>PG 31126 H 338</b>		
				F. Transporter's Phone		
				G. State Facility's ID		
				H. Facility's Phone <b>501-863-7173</b>		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a. <b>WASTE, POISONOUS SOLID, N.O.S., (DINOSEB) 6.1., UN 2811, PG II, RQ</b>		No. <b>8</b> Type <b>D M</b>		<b>4 5 7 6</b>	<b>P</b>	<b>P020</b>
b. <b>WASTE, POISONOUS LIQUID, N.O.S., (DINOSEB) 6.1., UN 2810, PG II, RQ</b>		No. <b>3</b> Type <b>D H</b>		<b>5 3 4 1</b>	<b>P</b>	<b>P020</b>
c.						
d.						
J. Additional Descriptions for Materials Listed Above <b>RQ 1000</b>		K. Handling Codes for Wastes Listed Above <b>EMERGENCY RESPONSE INFORMATION: SHIFT SUPERVISOR 501-572-3701</b>				
15. Special Handling Instructions and Additional Information <b>WMDS 198930 ORDER# 87156 MAR 31, 1830 P.O.# 04-030670 LOAD# 69592 BILL OF LADING# 4-5867</b>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name		Signature		Month Day Year		
<b>DAVID L. LEE</b>		<i>[Signature]</i>		<b>10 13 11 92</b>		
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Month Day Year		
Printed/Typed Name <b>DAVID LEE</b>		<i>[Signature]</i>		<b>10 13 11 92</b>		
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year		
Printed/Typed Name						
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Month Day Year		



Joe  
12  
APR 04 1992

# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 30, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

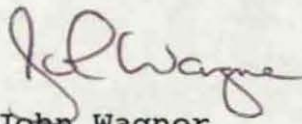
Re: CAO LIS 91-118; Supplemental Removal Work Plan

Dear Joe:

Results were received today from ENRAC's laboratory with regard to the three "closure" samples in hole number two. All three were non-detect for dinoseb. Therefore, we have begun backfilling hole number two.

All drums have been removed from hole number three and it is being prepared for sampling. I hereby request that ADPC&E send a representative to the West Helena site, after Tuesday March 31, so that we can take samples for final testing.

Sincerely,

  
John Wagner

cc: Mr. Allen Malone  
Ms. Pat Crossley

Steve

3-23-92

I do not think that it is clear in the amended CAO that the requirements of the supplemental work plan are in addition to the requirements of the original work plan and that the original work plan shall also be followed.

The supplemental/Removal work plan is O.K. except, should the word Final be used in Item No. 5 which adds a section titled "Final Closure Sample Analysis"? This action will not yield a Final closure and this word is misleading.

I suggest using "Interim Closure Sample Analysis" or just "Closure Sample Analysis".

Is the statement under Item No. 5 strong enough to protect our right to require additional closure actions for these locations or do we need to ~~add~~ reinforce this right in the amended CAO itself?  
See Hoover



Joe  
1992  
MAR 26 1992

# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 23, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P. O. Box 8913  
Little Rock, AR 72219-8913

Re: CAO LIS-91-118; Supplemental Removal Action Work Plan

Dear Joe:

This letter is to confirm our conversation of Friday, March 20. Pursuant to the enclosed Supplemental Removal Action Work Plan to be attached as an exhibit to the amended CAO LIS-91-118, Cedar Chemical ("Cedar") has caused the following remedial actions to be performed:

1. Cedar contracted with ENRAC Division of Chemical Waste Management to perform a drum removal project at our West Helena facility. The crew arrived on-site March 12 and began setting up.

After my meeting with you and your staff on Friday, March 13, ENRAC was told to go on standby until Cedar determined whether to proceed with the interim measures option.

On March 16, in a telephone conference call with you and Allen Malone, we advised you of Cedar's intent to proceed with implementation of the Work Plan, and I read you the final revisions to the Plan which you had requested on March 13. ENRAC was then told to proceed with the removal following the procedures outlined in the original Work Plan, the supplement to the original Work Plan, and the addendum to the supplement.

2. Soil samples were collected from the upper three feet of overburden of Anomaly No. 1 (northwest). This material was scraped aside and will be sent to Chemical Waste Management's Carlyss, LA Subtitle C landfill.

The soil interval from three feet deep to the top of the drums was determined by total volatile and semi-volatile analysis in ENRAC's laboratory, and through generator knowledge, to contain six RCRA hazardous wastes: P020/dinoseb, U070/o-dichlorobenzene, U170/p-nitrophenol, U220/toluene, U239/xylene and U247/methoxychlor (D014/methoxychlor). This soil and debris was profiled accordingly to the Carlyss landfill.

3. The material in the shaft that was originally dug to confirm the presence of drums, and the overburden below three feet, is currently being sent to the Carlyss landfill. As of this date forty-nine trucks, containing approximately 1300 tons of soil and debris, have left the site.

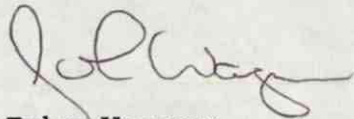
The hole is approximately twenty feet deep at its deepest point and all drums have been removed. We are currently scraping back to what visually appears to be "clean" dirt in preparation for sampling.

4. Seven buried drums contained material and these were overpacked prior to removal from the hole. Samples have been taken and will be analyzed at a future date.

Drum carcasses were sent out as debris with the soil (40-55 gallon, 25-30 gallon and 20-5 gallon).

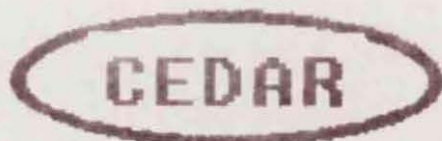
5. As a result of the initial laboratory analysis the entire overburden from Anomaly No. 2 (north central) has been determined to be contaminated and will be excavated and sent to Chemical Waste Management's Carlyss, LA Subtitle C landfill.

Sincerely,



John Wagner





Chemical Corporation

P.O. Box 2749  
West Helena, AR 72390  
Voice: 501-572-3701  
Fax: 501-572-3795

To: Hazardous Waste

From: JOHN WINGNER

Attn: Jore Hoover

Date: 23 Mar 92

Fax:

Pages: 6 + Cover

Message:

u  
"   
REVISED LETTER

THIS LETTER SHOULD REPLACE THE ONE  
SENT EARLIER THIS MORNING.

10/11/92

**CEDAR CHEMICAL CORPORATION**

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 23, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P. O. Box 8913  
Little Rock, AR 72219-8913

Re: CAO LIS-91-118; Supplemental Removal Action Work Plan

Dear Joe:

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2. Soil samples were collected from the upper three feet of overburden of Anomaly No. 1 (northwest). Anecdotal evidence and visual observation suggested that this initial overburden could be used for backfill. This material was scraped aside and will be sent to Chemical Waste Management Carlyss, LA Subtitle C landfill.



2.

The soil interval from three feet deep to the top of the drums was determined by total volatile and semi-volatile analysis in ENRAC's laboratory, and through generator knowledge, to contain six RCRA hazardous wastes: P020/dinoseb, U070/o-dichlorobenzene, U170/p-nitrophenol, U220/toluene, U239/xylene and U247/methoxychlor. This soil and debris was profiled accordingly to the Carlyss landfill.

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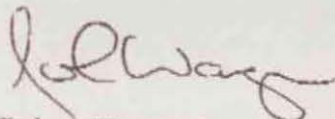
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5. The entire overburden from Anomaly No. 2 (north central) has been determined to be contaminated and will be sent to Chemical Waste Management's Carlyss, LA Subtitle C landfill.

Sincerely,



John Wagner



SENT BY:

3-23-92 10:32AM :CEDAR CHEMICAL CORP.-

501 572 3795:# 2/ 5

MAR-16-1992 14:38 FROM APPERSON CRUMP &amp; ASSOC. TO

1501688817 P.02/04

SUPPLEMENTAL REMOVAL WORK PLANBACKGROUND

As reported by letter from Cedar to ADPC&E dated February 24, 1992, it was learned in the course of discovery depositions taken in Cedar's suit for contribution and cost recovery against Wormald U.S., Inc., pending in the Chancery Court of Phillips County, that an additional drum burial area used for disposal of dinoseb products in 1972 may exist adjacent to the first burial area referred to in the CAO. Cedar retained GSI to carry out a geophysical survey, and as a result, two anomalies were located which are believed to be separate drum burial sites identified in site map attached hereto.

ITEMS TO BE ADDRESSED

ITEM NO. 1 - Add a section numbered 3.4 and titled "Stormwater Runoff Protection".

Both areas will be surrounded with a one foot high earthen berm. Access lanes for equipment will be re-bermed when the crew is not working. One hole is near a drainage channel for stormwater runoff, so any other precautions deemed necessary will be instituted as the situation warrants. Any water that may accumulate in either excavation area as a result of storm water runoff or rainfall will immediately be pumped into the DCA Unit Sump for transfer to Respondent's Biological Treatment System.

ITEM NO. 2 - Soil analysis, removal and disposal topics in the original work plan discussed the soil adjacent to the drums, but did not consider disposal of the overburden (see section 5.2). In order to adequately determine if the overburden can be sent to a Subtitle C landfill, or used as backfill, the following sampling/analysis program will be used. Figure 2 has been modified to reflect the new sites. This item should be added as section 5.2.1 and titled "Characterization of the Overburden":

Anomaly number 1 (northwest) - Three bore holes were spaced fifteen feet apart over the anomaly. Cores were sampled at one foot intervals down to five feet. The three borehole samples from the one-foot depth have been composited. The same was done with the samples from the two-foot and four-foot depths.

Two of the three bore holes in anomaly number 1 struck what appeared to be an old gravel road or parking lot surface at a depth of five feet. It is known that the elevation of this area of the plant was raised by fill being brought in from off site beginning in 1973. It is assumed, therefore, that the first five feet of soil beneath the present surface is fill on top of the 1972 surface. The drums are believed to have been buried in 1972.

EXHIBIT 1



SENT BY:

3-23-92 10:32AM CEDAR CHEMICAL CORP.

501 572 3785:# 3/ 5

MAR-16-1992 14:38 FROM APPERSON CRUMP &amp; ASSOC. TO

1561688817 P.03/84

The three composite soil samples from the upper four feet will be analyzed for dioxin by ENRAC's laboratory. Methods 8270 (total semi-volatiles) and 8240 (total volatiles) will also be applied. This information, along with generator knowledge, will be used to determine if this portion of the overburden can go to landfill, or if it can be used to backfill the hole.

A sample already collected from the area near the top of the buried drums will be analyzed, using the above methods, in order to determine the status of the interval from four to ten feet deep. Experience from the previous removal showed that the area nearest the top of the drums was the most contaminated. Based on observations during collection of this ten foot deep sample, Cedar is assuming that the four to ten foot deep interval will have to be disposed of, and that this sample is more representative of the interval.

Anomaly number 2 (north central) - The same procedures will be used hereto determine the status of the overburden as were used for anomaly number 1.

The buried gravel layer encountered over anomaly 1 is present here, but at a depth of three feet. The nine samples from the three boreholes have been composited from the one-foot, two-foot and three-foot depths as was done for anomaly 1. A sample from the area near the top of the drums will also be analyzed as explained above, and will be used to classify the overburden interval below three feet.

NOTE: Upon receipt of these sample analyses, they will immediately be delivered to the ADPC&E - Hazardous Waste Division.

ITEM NO. 3 - Add a section numbered 5.5.6 and titled "Unknowns".

If unknown substances are encountered during the course of the excavations, further lab analysis will be conducted prior to the removal/disposal of this material. If it is necessary to temporarily stage this material on-site, roll-off, or other similar containers will be used.

ITEM NO. 4 - Add section number 6.2.1 and titled "Sample Location Notification".

Cedar will notify ADPC&E - Hazardous Waste Division, no less than five days prior to taking the closure samples. This is for the purpose of allowing the division representative to be able to acquire these samples for the division's use, and to observe the sampling procedure. It is understood that if said representative is not present at the announced time, Cedar has the division's approval to proceed with the collection of our samples.

SENT BY:

3-23-92 10:33AM CEDAR CHEMICAL CORP. +

501 572 3795:# 4/ 5

Backfilling of the hole will not begin until the sample analysis is complete and the results are confirmed.

ITEM NO. 5 - Add a section numbered 6.3 and titled ~~Final~~ Closure Sample Analysis".

Prior to closure of the holes, the samples taken from the grid referred to in Section 6.2 will be sent to an independent laboratory for analysis. It is understood that the 80 ppm dioxin in soil contamination level referred to in the original Work Plan is a health-based standard for closure, and that the level required for clean closure may be different. This issue will be determined in connection with the selection of final corrective measures.



03-23-92 10:43AM FROM CEDAR CHEMICAL CORP. TO 15622541

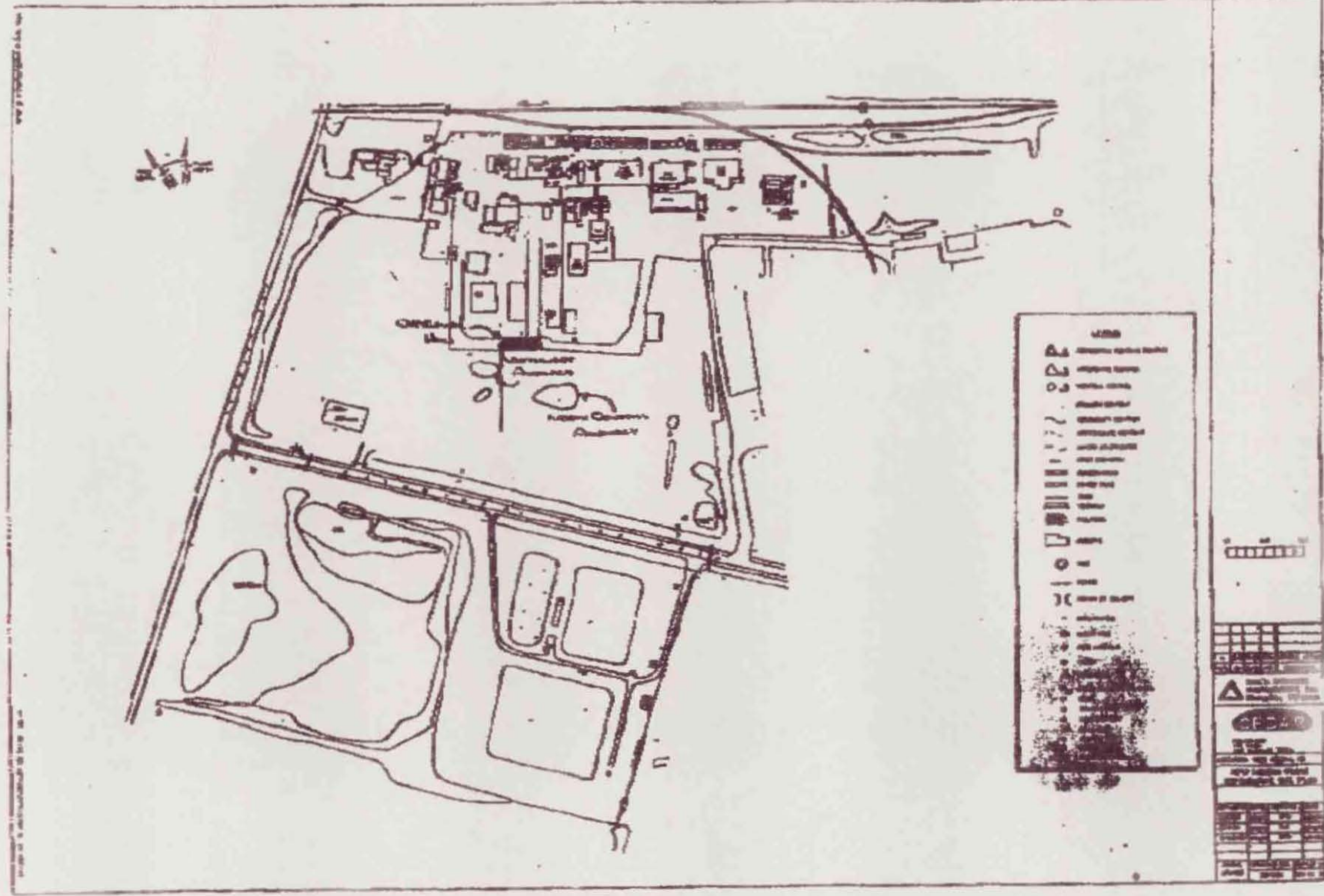
SENT BY:

3-23-92 10:33AM :CEDAR CHEMICAL CORP.-

Z 010012

501 572 3785:# 5/ 5

P007/007



P002/002

TO 16888617

03-16-92 04:15PM FROM CEDAR CHEMICAL CORP.

00000000

00000000

00000000 00000000 00000000

**MITCHELL, WILLIAMS, SELIG  
GATES & WOODYARD**

1000 SAVERS FEDERAL BUILDING  
CAPITOL AVE. AT SPRING ST.  
LITTLE ROCK, ARKANSAS 72201  
(501) 688-8800  
Telefax # 688-8807

\*\*\*\*\*

**TELEFAX TRANSMITTAL COVER SHEET**

DATE: March 23, 1992

TIME: 11:32 am

**PRIVILEGED AND CONFIDENTIAL**

The information following this cover sheet and contained in this facsimile transmission is *confidential* and covered by the attorney-client privilege. It is intended for the sole use of the person(s) to whom it is addressed. If the reader of this message is not the named addressee or an employee or agent responsible for delivering this message to the intended recipient(s), please do not read the accompanying information. Note that the dissemination, distribution or copying of this communication by anyone other than the addressee is strictly prohibited. Anyone receiving this message in error should notify us immediately by telephone and return the original of the transmission to us at the above address by U.S. mail. Thank you for your cooperation.

PLEASE DELIVER TO:

NAME: JOE HOOVER

**PLEASE DELIVER ASAP**

FIRM: ADPC&amp;E

LOCATION: LITTLE ROCK, AR

TELECOPY NUMBER: 562-2541

FROM: MARCY TAYLOR

PERSON SENDING THIS FACSIMILE IS: SUSAN HUNTHROP

TOTAL PAGES (INCLUDING COVER SHEET): 6

FILE NO.: 8060-2

REMARKS/SPECIAL INSTRUCTIONS: RE: CEDAR CHEMICAL CORP LIS 91-118  
ENCLOSED IS A REVISED DRAFT OF THE AMENDED CONSENT ADMINISTRATIVE  
ORDER

IF YOU DO NOT RECEIVE ALL THE PAGES OR THERE IS A PROBLEM DURING  
TRANSMISSION, PLEASE CALL (501) 688-8800.



## ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

IN THE MATTER OF:

CEDAR CHEMICAL CORPORATION,  
WEST HELENA, ARKANSAS  
ARD990660659

No. LIS-91-118

## AMENDED CONSENT ADMINISTRATIVE ORDER

JURISDICTION

1. This Amended Consent Administrative Order is entered pursuant to authority of the Arkansas Department of Pollution Control & Ecology ("ADPC&E") under the Arkansas Remedial Action Trust Fund Act ("ARATFA"), Ark. Code Ann. § 8-7-508, as currently amended; the Arkansas Hazardous Waste Management Act ("AHWMA"), Ark. Code Ann. § 8-7-214; and the Arkansas Hazardous Waste Management Code (the "Code"). All terms contained within this document shall have the definitions as found in the above-referenced laws, unless the context plainly indicates otherwise.

2. The original Consent Administrative Order in this cause was approved for entry by the Director of the ADPC&E on July 11, 1991, and became effective July 12, 1991. Cedar Chemical Corporation ("Cedar") is the current owner and operator of the subject facility.

3. Paragraph 10.c of the original Consent Administrative Order contemplated the possibility that interim measures (in addition to implementation of the Removal Plan referred to in Paragraph 10.a) could be required pending completion of the Facility Investigation and Corrective Measures Study required under the terms of the original Consent Administrative Order.

STATEMENT OF PURPOSE

4. By entering into this Amended Consent Administrative Order, the mutual objectives of ADPC&E and Cedar are to complete removal of buried drums and contaminated soil located at two separate locations on the subject Site and to carry out a closure of such burial areas in accordance with the Supplemental Removal Work Plan attached as Exhibit 1 to this Amended Consent Administrative Order.

PARTIES

5. Unless further amended, the original Consent Administrative Order shall continue to be binding upon ADPC&E and Cedar. The terms of this Amended Consent Administrative Order shall be binding upon both ADPC&E and Cedar, and their respective successors and assigns, with the obligations of such parties

being specified herein. This Amended Consent Administrative Order shall control the work of all persons, agents, contractors and technical consultants acting under or for ADPC&E or Cedar in carrying out the actions required hereunder.

6. Each contractor, subcontractor, laboratory and technical consultant retained to conduct any portion of the work performed pursuant to this Amended Consent Administrative Order shall be provided with a copy of the Amended Consent Administrative Order prior to said contractor's, subcontractor's, laboratory's or consultant's initiation of work conducted hereunder.

7. Any contract entered into for the purpose of carrying out any actions required by this Amended Consent Administrative Order shall incorporate the requirements hereof pertaining to the work to be performed or services or materials to be supplied.

#### SUPPLEMENTAL FINDINGS OF FACT

8. Based on available information regarding the Site, ADPC&E makes the following supplemental findings of fact:

a. Substantial quantities of dinitrobutylphenol, also known as dinoseb, were manufactured on the Site from approximately January 1972 through July 1972.

b. There is evidence that third parties unrelated to Cedar, who operated, managed, and controlled the Site prior to Cedar's acquisition of the Site and during the period of dinoseb production, may be liable persons under ARATFA, and ADPC&E is currently investigating those facts.

c. Two additional drum burial areas, in addition to the one identified in the Removal Work Plan approved under the original Consent Administrative Order, exist on the Site, and there is evidence that these areas may have been used late in 1972 for the burial of dinoseb products and other materials.

d. The two additional drum burial areas require additional work which is substantially similar to the work carried out under the Removal Work Plan approved under the original Consent Administrative Order, and delay in the completion of the additional work may require the expenditure of substantially greater costs than if the work was expeditiously carried out.

e. ADPC&E and Cedar have agreed on the measures specified in the Supplemental Removal Work Plan attached hereto as Exhibit 1.



f. Work at the two additional drum burial areas has been performed by Cedar as described in the letter attached hereto as Exhibit 2. Prior to the commencement of the work described in Exhibit 2, the terms of the Supplemental Removal Work Plan were orally agreed upon by ADPC&E and Cedar.

g. ADPC&E and Cedar agree that the measures specified in the Supplemental Removal Work Plan attached as Exhibit 1 are being undertaken as described in Exhibit 2 and should continue to be undertaken expeditiously. Subject to the reservation of rights contained in paragraph 12 below, Cedar has expressed its willingness to proceed immediately with the remedial actions contemplated hereunder.

#### CONCLUSIONS OF LAW

9. Based upon the foregoing supplemental findings of fact, the Director, ADPC&E, makes the following supplemental conclusions of law:

a. Performance of its obligations under this Amended Consent Administrative Order shall make Cedar eligible under Ark. Code Ann. § 8-7-520 to seek contribution from any third person not a party to this Amended Consent Administrative Order who may be a liable party.

#### DETERMINATION

10. Based upon the foregoing supplemental findings of fact and conclusions of law, the Director, ADPC&E, has determined that:

a. There is a threat of release of a hazardous substance at the additional drum burial areas referred to herein.

b. It is necessary that the drums and any contaminated soil located in the additional drum burial areas referred to herein be removed from the Site and properly disposed of in a manner consistent with the Supplemental Removal Work Plan attached as Exhibit 1.

c. The actions agreed upon under the terms of this Amended Consent Administrative Order are in the public interest, are consistent with the National Oil and Hazardous Substances Contingency Plan, 40 C.F.R. § Part 300, and are necessary to protect the public, health, welfare and the environment.



ORDER

11. IT IS THEREFORE AGREED AND ORDERED by consent of Cedar and ADPC&E as follows:

Additional Interim Measures

a. As an additional interim measure to achieve the purposes of the original Consent Administrative Order and the purposes of this Amended Consent Administrative Order, Cedar has retained and shall continue to retain a qualified contractor or contractors to excavate the additional suspected drum disposal areas and remove all contaminated soil, debris and drums for offsite disposal, all in accordance with the Supplemental Removal Work Plan attached as Exhibit 1 and as described in Exhibit 2.

b. Within sixty (60) days after completion of the Supplemental Removal Work Plan, Cedar shall submit to ADPC&E a detailed written report describing the activities undertaken to complete said plan, including all necessary and appropriate certifications and supporting information which is reasonably necessary for ADPC&E to evaluate and approve such report.

RESERVATION OF RIGHTS

12. Nothing in the original Consent Administrative Order or this Amended Consent Administrative Order shall be deemed to be a determination that Cedar is primarily or principally liable for the remedial actions taken by Cedar thereunder. Cedar's cooperation with ADPC&E to expedite implementation of these remedial measures, despite the lack of cooperation or participation by other liable parties, shall not prejudice in any way Cedar's rights to recover from any other liable parties the remedial costs it has expended pursuant to the orders.

13. Nothing in the original Consent Administrative Order or this Amended Consent Administrative Order shall limit ADPC&E's authority to join additional respondents, with or without their consent, for the purpose of subjecting other liable parties to the terms of the order. The remedial measures taken under this order are interim measures. ADPC&E reserves the right to seek or order additional remedial action from any liable person.

IT IS SO AGREED AND ORDERED.



DATE: \_\_\_\_\_

CEDAR CHEMICAL CORPORATION

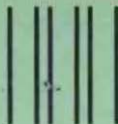
By: \_\_\_\_\_

DATE: \_\_\_\_\_

DIRECTOR, ARKANSAS DEPARTMENT  
OF POLLUTION CONTROL & ECOLOGY

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Department of Pollution & Ecology  
8001 National Drive  
P. O. Box 9583  
Little Rock, AR 72201



HWD 9H

**SENDER:**

- Complete item 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

who wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: *John Wagner*

*Cedar Chemical Corp.  
West Helena Plant  
Hwy 242  
West Helena AR  
72390*

4a. Article Number

*P 838-401-771*

4b. Service Type

- ☒ Registered ☐ Insured  
☐ Certified ☐ COD  
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

*3-23-92*

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

*John Wagner*


P 838 401 771

HWD

# RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED,  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	Wagner Cedar Chem.	
Street and No.	W. Helena Plant HWY 242	
P.O., State and ZIP Code	W. Helena, AR 72390	
Postage	\$	99
Certified Fee		100
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt showing to whom and Date Delivered		100
Return Receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees		299
Postmark or Date		



**STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,  
CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)**

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.

03-23-92 09:54AM

FROM CEDAR CHEMICAL CORP.

TO 15622541

P001/003

**CEDAR**

**Chemical Corporation**

P.O. Box 2749  
West Helena, AR 72398  
Voice: 501-572-3701  
Fax: 501-572-3795

To: Hazardous Waste

Attn: Joe Hoover

Fax:

From: John Wagner

Date: 23 Mar 92

Pages: 2 - Cover

---

Message:





STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



CERTIFIED MAIL # P 838 401 771

March 19, 1992

Mr. John Wagner  
Environmental Manager  
Cedar Chemical Corporation  
West Helena Plant  
Highway 242  
West Helena, Arkansas 72390

# 54-0068  
CSN.....  
PERMIT NO #.....  
WASTE-SORT:

RE: Drum Removal Action

Dear John:

I have just been informed, via our telephone conversation this afternoon, that Cedar Chemical has proceeded with implementation of the Supplemental Removal Action Work Plan (PLAN) for the interim measure removal of the second and third buried drum accumulations at the West Helena facility. Please take note that the amended Plan has not been incorporated into Consent Administrative Order (CAO) LIS 91-118 by amendment or modification of the Order as of this time. Therefore, any activities conducted in the removal action are not authorized pursuant to CAO LIS 91-118, and may not be deemed acceptable to the Department for interim or final action.

Please contact me immediately regarding this matter.

Sincerely,

Joseph M. Hoover  
Manager  
Enforcement Branch  
Hazardous Waste Division

JH/cm301

cc: Allen T. Malone

## CEDAR CHEMICAL CORPORATION

P.O. Box 2740, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 23, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P. O. Box 8913  
Little Rock, AR 72219-8913

Re: CAO LIS-91-118; Supplemental Removal Action Work Plan

Dear Joe:

This letter is to confirm our conversation of Friday, March 20. Pursuant to the Supplemental Removal Action Work Plan of amended CAO LIS-91-118, Cedar Chemical ("Cedar") has caused the following remedial actions to be performed:

1. Cedar contracted with ENRAC Division of Chemical Waste Management to perform a drum removal project at our West Helena facility. The crew arrived on-site March 12 and began setting up.

Subsequent to the conversation Allen Malone and I had with you on Monday, ENRAC was told to proceed with the removal following the procedures outlined in the original work plan, the supplement to the original work plan, and the addendum to the supplement.

2. Soil samples were collected from the upper three feet of overburden of Anomaly No. 1 (northwest). Anecdotal evidence and visual observation suggested that this initial overburden could be used for backfill. This material was scraped aside and will be sent to Chemical Waste Management's Carlyss, LA Subtitle C landfill.

The soil interval from three feet deep to the top of the drums was determined by total volatile and semi-volatile analysis in ENRAC's laboratory, and through generator knowledge, to contain six RCRA hazardous wastes: P020/dinoseb, U070/o-dichlorobenzene, U170/p-nitrophenol, U220/toluene, U239/xylene and U247/methoxychlor. This soil and debris was profiled accordingly to the Carlyss landfill.

3. The material in the shaft that was originally dug to confirm the presence of drums, and the overburden below three feet, is currently being sent to the Carlyss landfill. As of this date forty-nine trucks, containing approximately 1300 tons of soil and



2.

debris, have left the site.

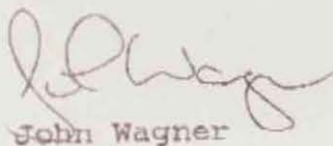
The hole is approximately twenty feet deep at its deepest point and all drums have been removed. We are currently scraping back to what visually appears to be "clean" dirt in preparation for sampling.

4. Seven buried drums contained material and these were overpacked prior to removal from the hole. Samples have been taken and will be analyzed at a future date.

Drum carcasses were sent out as debris with the soil (40-55 gallon, 25-30 gallon and 20-5 gallon).

5. The entire overburden from Anomaly No. 2 (north central) has been determined to be contaminated and will be sent to Chemical Waste Management's Carlyss, LA Subtitle C landfill.

Sincerely,

  
John Wagner

*Any excavation?*



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



CERTIFIED MAIL # P 838 401 771

March 19, 1992

Mr. John Wagner  
Environmental Manager  
Cedar Chemical Corporation  
West Helena Plant  
Highway 242  
West Helena, Arkansas 72390

RE: Drum Removal Action

Dear John:

I have just been informed, via our telephone conversation this afternoon, that Cedar Chemical has proceeded with implementation of the Supplemental Removal Action Work Plan (PLAN) for the interim measure removal of the second and third buried drum accumulations at the West Helena facility. Please take note that the amended Plan has not been incorporated into Consent Administrative Order (CAO) LIS 91-118 by amendment or modification of the Order as of this time. Therefore, any activities conducted in the removal action are not authorized pursuant to CAO LIS 91-118, and may not be deemed acceptable to the Department for interim or final action.

Please contact me immediately regarding this matter.

Sincerely,

Joseph M. Hoover  
Manager  
Enforcement Branch  
Hazardous Waste Division

JH/cm301

cc: Allen T. Malone

Apperson, Crump, Duzane & Maxwell  
2110 ONE Commerce Square  
Memphis, TN 38103



**CEDAR****Chemical Corporation****P.O. Box 2749****West Helena, AR 72398****Voice: 501-572-3701****Fax: 501-572-3795****To:** Jore Hoover**From:** John Wagner**Attn:** Haz Waste Div**Date:** 16 Mar 92**Fax:****Pages:** 1 + Cover

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**Message:**

## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 16, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: CAO LIS-91-118; Supplemental Removal Action Work Plan, Addendum  
to

Dear Joe:

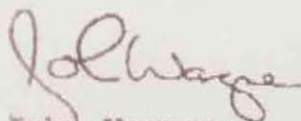
As a result of our meeting on March 13 concerning the removal procedures for the second and third buried drum accumulations, the following items should be added as an addendum to the Supplemental Removal Action Work Plan submitted in my letter of March 6, 1992:

1. Any water that may accumulate in either hole as a result of stormwater runoff or rainfall will immediately be pumped into the DCA unit sump for transfer to our biological treatment system.

2. It is understood by Cedar Chemical that the 80 ppm dinoseb-in-soil contamination level referred to in the original Work Plan is a health-based standard for closure and that the level required for clean closure may be different. This issue will be determined in connection with the selection of final corrective measures.

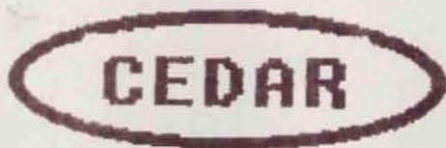
It is understood that upon entry of an amended administrative order directing Cedar Chemical to implement the Supplemental Removal Work Plan, Cedar Chemical shall cause the Plan to be implemented to completion, without interruption, unless the Plan is further modified by written consent of ADPC&E and Cedar Chemical.

Sincerely,



John Wagner





Chemical Corporation

P.O. Box 2749  
West Helena, AR 72390  
Voice: 501-572-8701  
Fax: 501-572-3795

To: Jore Houser

From: John Wagner

Attn: Haz Waste Div

Date: 10 Mar 98

Fax:

Pages: 3 + Cover

Message:

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## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

March 10, 1992

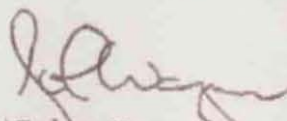
Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Removal Action Work Plan Supplement, Additional Information

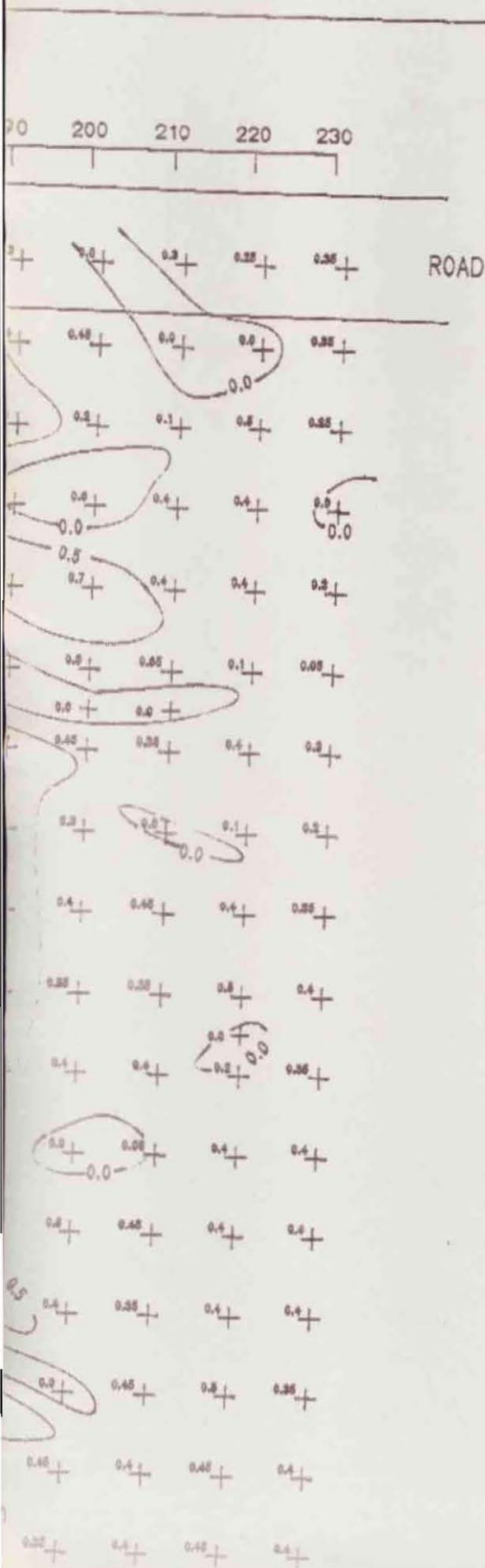
Dear Joe:

Enclosed is the preliminary map resulting from GSI's conductivity survey and as referenced in my letter of March 6. The 1.5 contour is thought to coincide with the limits of the buried drum accumulation.

Sincerely,

  
John Wagner

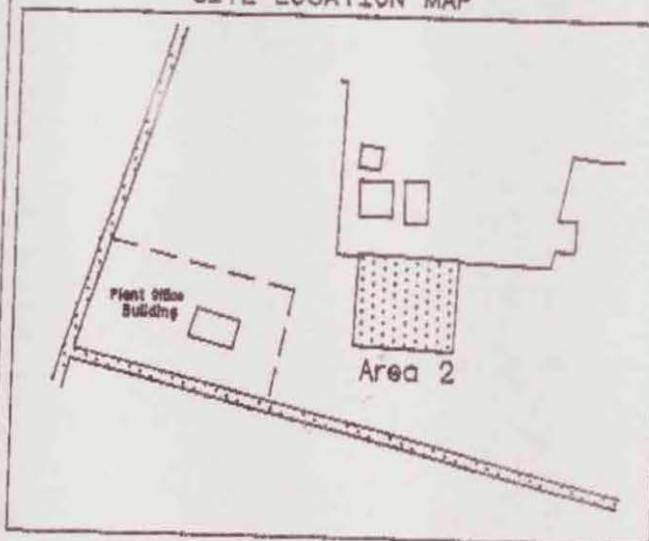




## PRELIMINARY


 PLANT  
NORTH

SITE LOCATION MAP



## LEGEND

- + Ground Conductivity Measurement Location
- 1.5 Inphase Measurement of Ground Conductivity In Tens of Millimhos / Meter. Off-Grid Background Reading set to 6 Millimhos / Meter
- ⊠ Hand Auger Location
- ⊙ Fire Hydrant
- 2.0 — Conductivity Contour Line with values expressed in tens of millimhos / meter

Contour Interval = 5 millimhos / meter

NOTE: Ground conductivity survey conducted during the period of February 18 - 20, 1992, using a Geonics EM-31 non-contacting terrain conductivity meter. All survey locations relative to arbitrary datum point at north guard post of fire hydrant, corresponding to point (0 ft. E., 10 ft. S) on sampling grid.



FO4/04

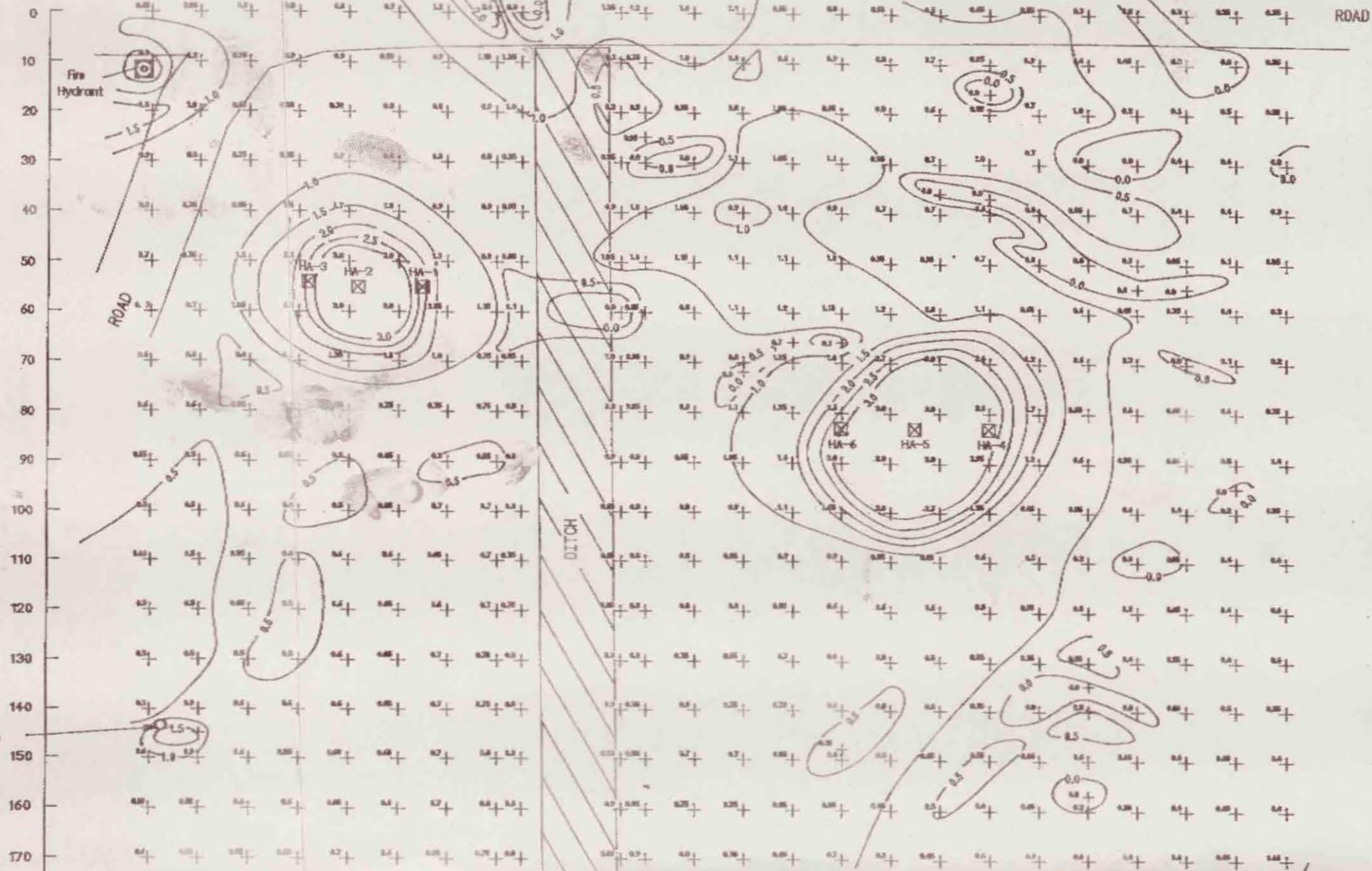
02-10-92 09:58 AM FROM CEDAR CHEMICAL CORP

FEET EAST

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230

FEET SOUTH

Line



PRELIM

SITE



+ Ground Location

1.5 Inphase Conductivity Off-Grid 6 Meters

HA-1

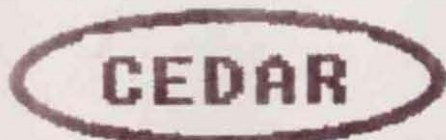
Fire Hyd

2.0 Conductivity expressed

Contour Interval

NOTE: Ground conductivity data was collected during the period of February 1992. All data was collected using a non-invasive survey technique and is not a true representation of the ground conditions. The data is for informational purposes only and should not be used for any other purpose.





**Chemical Corporation**

**P.O. Box 2749  
West Helena, AR 72390  
Voice: 501-572-3701  
Fax: 501-572-3795**

**To:** Hazardous Waste

**From:** John Wagner

**Attn:** Don Houser

**Date:** 6 Mar 92

**Fax:**

**Pages:** 8 + Cover

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**Message:**

MAR-06-1992 13:40 FROM APPERSON CRUMP &amp; ASSOC. TO

15015723795 P.02/05

**CEDAR CHEMICAL CORPORATION**

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

March 6, 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P. O. Box 8913  
Little Rock, Arkansas 72219-8913

Re: In the Matter of: Cedar Chemical Corporation, West Helena,  
Arkansas, No. LIS-91-118 Removal Action Work Plan Supplement

Dear Joe:

This letter is a follow up to our meeting of February 27 with regard to modifying procedures for the removal of buried drums from Cedar Chemical's West Helena facility. Two anomalies were discovered through a geophysical conductivity survey performed by our contractor, Groundwater Services, Inc. (GSI). That the two anomalies were caused by buried drums was confirmed after we dug into the center of each. The two areas are shown in the enclosed site map (Figure 2). A full report of the survey will be submitted by GSI shortly.

The point of reference is the original work plan prepared by Woodward-Clyde in June 1990, referred to in Paragraph 3.a of the referenced CAO, and implemented by Chemical Waste Management, Inc., ENRAC Division (ENRAC) as reflected in Cedar's final report dated January 15, 1992, which was submitted to you. Also attached hereto is a copy of a Bill of Sale dated November 15, 1972, which purports to identify all items of inventory (raw materials and finished products) located on the site as of that date. It is reasonable to assume that drums buried in the two additional sites referred to above came exclusively from the inventory listed in this bill of sale.

The Supplemental Removal Work Plan which you requested at our conference is the Woodward-Clyde Removal Work Plan as supplemented hereafter in this letter, which together are intended to govern the



MAR-06-1992 13:40 FROM APPERSON CRUMP &amp; ASSOC. TO

15015723795 P.03/05

Mr. Joe Hoover  
March 6, 1992  
Page Two

excavation and removal of drums at the two additional suspected drum burial areas referred to above.

#### SUPPLEMENTAL REMOVAL WORK PLAN

##### BACKGROUND

As reported by letter from Cedar to ADPC&E dated February 24, 1992, it was learned in the course of discovery depositions taken in Cedar's suit for contribution and cost recovery against Wormald U.S., Inc., pending in the Chancery Court of Phillips County, that an additional drum burial area used for disposal of dinoseb products in 1972 may exist adjacent to the first burial area referred to in the CAO. Cedar retained GSI to carry out a geophysical survey, and as a result, two anomalies were located which are believed to be separate drum burial sites identified in site map attached hereto.

##### ITEMS TO BE ADDRESSED

ITEM NO. 1 - Add a section numbered 3.4 and titled "Stormwater Runoff Protection".

Both areas will be surrounded with a one foot high earthen berm. Access lanes for equipment will be re-bermed when the crew is not working. One hole is near a drainage channel for stormwater runoff, so any other precautions deemed necessary will be instituted as the situation warrants.

ITEM NO. 2 - Soil analysis, removal and disposal topics in the original work plan discussed the soil adjacent to the drums, but did not consider disposal of the overburden (see section 5.2). In order to adequately determine if the overburden can be sent to a Subtitle C landfill, or used as backfill, the following sampling/analysis program will be used. Figure 2 has been modified to reflect the new sites. This item should be added as section 5.2.1 and titled "Characterization of the Overburden":

Anomaly number 1 (northwest) - Three bore holes were spaced fifteen apart over the anomaly. Cores were sampled at one foot intervals down to five feet. The three borehole samples from the one-foot depth have been composited. The same was done with the samples from the two-foot and four-foot depths.

Two of the three bore holes in anomaly number 1 struck what appeared to be an old gravel road or parking lot surface at a depth of five feet. It is known that the elevation of this area of the



MAR-06-1992 13:41 FROM APPERSON CRUMP &amp; ASSOC. TO

15015723795

P.04/05

Mr. Joe Hoover  
March 6, 1992  
Page Three

plant was raised by fill being brought in from off site beginning in 1973. It is assumed, therefore, that the first five feet of soil beneath the present surface is fill on top of the 1972 surface. The drums are believed to have been buried in 1972.

The three composite soil samples from the upper four feet will be analyzed for dioxin by ENRAC's laboratory. Methods 8270 (total semi-volatiles) and 8240 (total volatiles) will also be applied. This information, along with generator knowledge, will be used to determine if this portion of the overburden can go to landfill, or if it can be used to backfill the hole.

A sample already collected from the area near the top of the buried drums will be analyzed, using the above methods, in order to determine the status of the interval from four to ten feet deep. Experience from the previous removal showed that the area nearest the top of the drums was the most contaminated. Based on observations during collection of this ten foot deep sample, Cedar is assuming that the four to ten foot deep interval will have to be disposed of, and that this sample is more representative of the interval.

Anomaly number 2 (north central) - The same procedures will be used hereto determine the status of the overburden as were used for anomaly number 1.

The buried gravel layer encountered over anomaly 1 is present here, but at a depth of three feet. The nine samples from the three boreholes have been composited from the one-foot, two-foot and three-foot depths as was done for anomaly 1. A sample from the area near the top of the drums will also be analyzed as explained above, and will be used to classify the overburden interval below three feet.

NOTE: Upon receipt of these sample analyses, they will immediately be delivered to the ADPC&E - Hazardous Waste Division.

ITEM NO. 3 - Add a section numbered 5.5.6 and titled "Unknowns".

If unknown substances are encountered during the course of the excavations, further lab analysis will be conducted prior to the removal/disposal of this material. If it is necessary to temporarily stage this material on-site, roll-off, or other similar containers will be used.



Mr. Joe Hoover  
March 6, 1992  
Page Four

ITEM NO. 4 - Add section number 6.2.1 and titled "Sample Location Notification".

Cedar will notify ADPC&E - Hazardous Waste Division, no less than five days prior to taking the closure samples. This is for the purpose of allowing the division representative to be able to acquire these samples for the division's use, and to observe the sampling procedure. It is understood that if said representative is not present at the announced time, Cedar has the division's approval to proceed with the collection of our samples. Backfilling of the hole will not begin until the sample analysis is complete and the results are confirmed.

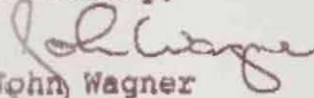
ITEM NO. 5 - Add a section numbered 6.3 and titled "Final Closure Sample Analysis".

Prior to closure of the holes, the samples taken from the grid referred to in Section 6.2 will be sent to an independent laboratory for analysis.

Cedar believes that it has reached agreement with Wormald U.S., Inc. (successor to The Ansul Company) to provide financial assistance in implementing the above-described interim remedial measures, provided that work can begin promptly in order to complete the project prior to May 8, 1992. Wormald's attorneys should deliver to you by the end of the day a proposed Amended Consent Administrative Order. The foregoing Supplemental Work Plan is intended to be attached as an exhibit to that Order.

We urgently request a meeting with you on Monday, March 9, 1992 for the purpose of reviewing this Supplemental Removal Work Plan and the proposed Amended Consent Administrative Order referred to above with a view to having the Order entered on or before March 10, 1992. Assuming that the Order can be entered in this time frame, we would expect ENRAC to begin implementing the Work Plan promptly.

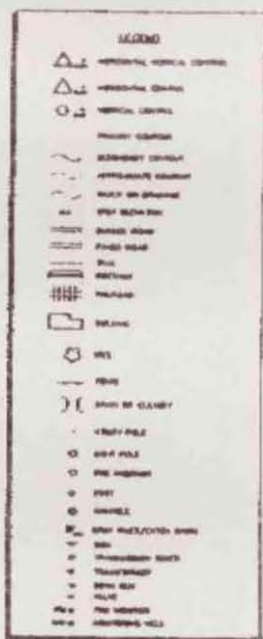
Sincerely,

  
John Wagner


JW:jgw

Enclosures

cc: Mr. Allan Gates  
Mr. Allen T. Malone



0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
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**SOLID PROPERTIES**  
 8110 W. 10TH AVE., SUITE 100  
 MINNEAPOLIS, MN 55420

CEDAR

DATE \_\_\_\_\_  
PAGE \_\_\_\_\_

NEW DELHI, PLANT  
HYDROLYSIS, 25. 10.

Parameter	Unit	Value	Ref.
Grain yield	t/ha	4.5	[10]
Grain yield	t/ha	4.5	[10]
Grain yield	t/ha	4.5	[10]

Student	10.000000	10.000000
Teacher	10.000000	10.000000

Figure 2



SENT BY:

2-28-82 : 3:51PM : CEDAR CHEMICAL CORP.

501 572 3795 # 2/ 4

## BILL OF SALE

Eagle River Chemical Corporation, for \$10.00 and other good and valuable consideration, receipt of which is hereby acknowledged, hereby sells and transfers to The Ansul Company the inventory set out on the attached Exhibit A.

EAGLE RIVER CHEMICAL CORPORATION

By *JM Dennis*Date *11/15/72*

SENT BY:

2-28-92 : 3:51PM : CEDAR CHEMICAL CORP.

501 572 3795: 3/ 4

**Eagle River Chemical Co.,**

Highway 7 242

WEST HELENA, ARKANSAS 72390

Physical Inventory as of  
November 4, 1972. Verified  
November 14, 1972

<u>Description</u>	<u>Container Size</u>	<u>No. of Containers</u>
Mesityl Oxide	55 Gallon	44
Mesityl Oxide	30 Gallon	169
Propanil Emulsifier	55 Gallon	78
Propanil Emulsifier	30 Gallon	20
Tri Isopropanolamine	30 Gallon	113
Versene 100	55 Gallon	48
Tri-ethylamine - TEA	55 Gallon	62
Tri-ethylamine - TEA	30 Gallon	9
NP-100	55 Gallon	28
Methanol	30 Gallon	9
DCA	55 Gallon	6
DCA	30 Gallon	10
Sodium Nitrate	100# Bag	61
Empty Prop Job	30 Gallon Drums	1,530
Empty Basenite 3#	5 Gallon Pails	1,600
Empty Basenite 5#	5 Gallon Pails	60
Sponto 2180	55 Gallon	6
Xylene	30 Gallon	6
Xylene	5 Gallon	2
Mobiltherm 600	55 Gallon	37
Mobiltherm 600 & H <sub>2</sub> O	55 Gallon	12
Mobiltherm 600 & H <sub>2</sub> O	30 Gallon	4
Flake Caustic	400# Drum	2
Toluol	55 Gallon	2
Pella Oil	55 Gallon	2
Recovered Propionic Acid	55 Gallon	46
8% 3# Dinitro	30 Gallon	150
Unknown Mat'l (To be Identified)	55 Gallon	28
Unknown Mat'l (To be Identified)	30 Gallon	43

I agree to the above stated physical inventory of The Eagle River Chemical Corporation as of November 14, 1972.

Signed \_\_\_\_\_



SENT BY

2-28-82 3:52PM CEDAR CHEMICAL CORP.

501 572 3795: 4/ 4

Eagle River Chemical Co.,

Highway 242

WEST HELENA, ARKANSAS 72390

EAGLE RIVER CHEMICAL CORPORATION PHYSICAL INVENTORY  
AS OF NOVEMBER 4, 1972, VERIFIED NOVEMBER 14, 1972

<u>Description</u>	<u>No. of Containers</u>	<u>Total Gallons</u>
Basanite 3# 5 Gallon	10,294	51,470
Basanite 3# 30 Gallon	2,593	77,790
Basanite 3# 55 Gallon	44	2,420
Basanite 5# 5 Gallon	230	1,150
Basanite 5# 30 Gallon	202	6,060
Basanite 5# 55 Gallon	12	660
Basanite 5# Bulk		6,077
Ancrack 5 Gallon	11	55
Ancrack 30 Gallon	3	90
Basanite 3# 5 Gallon	145	725

I agree to the above stated physical inventory of the Eagle River Chemical Corporation as of November 14, 1972.

Signed \_\_\_\_\_

2-27-92

Name

Joseph M. Horvath

JOHN WAGNER

David Hantley

Jeff Bennett

Phillip Murphy

RANDY K. OSBORN

Marcy Taylor

Representing

ADPC & E

Cedar Chemical

ADPC & E

EnSafe

ADPCE

ADPC & E

Cedar Chem. / Mitchell La Fin



ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
P. O. BOX 8913  
LITTLE ROCK, AR 72219 (501)570-2867

1991  
HAZARDOUS WASTE  
ANNUAL REPORT

SITE EPA ID NO ARD 990660649  
NAME Cedar Chemical Corp.

FORM IC  
PART I

1. SITE PHYSICAL LOCATION

Hwy 242 South  
West Helena, AR 72390  
COUNTY Phillips

2. MAILING ADDRESS

PO Box 2749  
West Helena, AR  
72390

3. COMPANY CONTACT

LAST NAME WAGNER FIRST NAME JOHN  
TITLE ENVIRONMENTAL ENGINEER TELEPHONE (501) 572-3701

4. HAS THE FACILITY CHANGED NAMES? (leave blank if no)

NEW NAME \_\_\_\_\_ OLD NAME \_\_\_\_\_

5. HAS THE FACILITY HAD A CHANGE IN OWNERSHIP? (leave blank if no)

NEW OWNER NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

6. DID THE FACILITY CLOSE? (leave blank if no, enter date if yes)

DATE CLOSED \_\_\_\_\_  
month day year

7. STANDARD INDUSTRIAL CLASSIFICATION CODES

A. 2869 B. 2879 C. \_\_\_\_\_ D. \_\_\_\_\_  
(the SIC Code is a four-digit number. See instructions for list of SIC Codes)

8. FACILITY CERTIFICATION

"I certify under penalty of law that this document and attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties under Section 3008 of the Resource Conservation and Recovery Act and Arkansas Code, Annotated, 8-7-204 for submitting false information, including the possibility of fine and imprisonment for knowing violations."

PRINT LAST NAME WAGNER  
FIRST NAME JOHN MI A.

SIGNATURE [Signature] DATE 920226  
yr mo day



SITE EPA ID NO. ARP0600649  
NAME Cedar Chemical Corp.

1991 ANNUAL REPORT  
FORM IC  
PART II

1. WHAT IS THIS SITE'S GENERATION STATUS FOR 1991?

- ☒ Category 1 (generated 2200 pounds or more per calendar month)  
☐ Category 2 (generated between 220 pounds and 2200 pounds per calendar month)  
☐ Category 3 (generated less than 220 pounds per calendar month)  
☐ Category 4 (PCB generator--STATE-DEFINED CATEGORY)

2. Was hazardous waste generated as a one-time event during 1991? (spill cleanup, remedial actions, one-time elimination of on-site waste.)

☐ No ☒ Yes

Was shipment made using a provisional number? If yes, list the provisional number.

ARP0600                     

If one-time event took place, briefly describe actions taken:

Buried Drum Remediation (P20 Soil & Debris)

3. LIST AMOUNT OF HAZARDOUS WASTE GENERATION FOR 1991. DO NOT INCLUDE NON-HAZARDOUS WASTE. ENTER AMOUNT AS POUNDS (P) OR TONS (T).

1991 TOTAL GENERATION 11,085,083 P

WHAT AMOUNT OF THE TOTAL GENERATION WAS SHIPPED OFF-SITE FOR MANAGEMENT 11,085,083 P

WHAT AMOUNT OF THE TOTAL GENERATION WAS HANDLED BY ON-SITE TREATMENT, STORAGE, DISPOSAL 0

4. LIST THE AMOUNT OF HAZARDOUS WASTE GENERATED IN 1990 AND CARRIED OVER INTO 1991 0

WHAT AMOUNT OF THE 1990 CARRY-OVER WAS SHIPPED OFF-SITE IN 1991 0

5. CERTIFICATION OF GENERATION STATUS AND GENERATION TOTALS:

I certify that the generation status and the generation totals shown on this report are true, accurate, and complete for the reporting year.

NAME JOHN A. WAGNER

TITLE Envir. Mgr

John A. Wagner  
signature

DATE 26 Feb 92



WASTE MINIMIZATION ACTIVITY

DID THIS SITE BEGIN OR EXPAND ONE OF THE FOLLOWING ACTIVITIES

1. SOURCE REDUCTION

1 YES ☒ 2 NO

2. RECYCLING

1 YES ☒ 2 NO

3. ASSESSMENT

1 SOURCE REDUCTION  
2 RECYCLING

4. WHAT FACTORS HAVE LIMITED THIS SITE FROM INITIATING NEW SOURCE REDUCTION ACTIVITIES? (check applicable factors)

- 01 no factors have limited new source reduction activities
- 02 insufficient capital to install new source reduction equipment or implement new source reduction practices
- 03 lack of technical information on source reduction techniques applicable to my specific production processes
- 04 source reduction is not economically feasible
- 05 concern that product quality may decline due to source reduction
- ☒ 06 technical limitations of the production process
- 07 permitting burdens
- 08 other \_\_\_\_\_

5. WHAT FACTORS HAVE LIMITED THIS SITE FROM INITIATING NEW ON-SITE OR OFF-SITE RECYCLING ACTIVITIES DURING THE REPORTING YEAR? (check applicable factors)

- 01 no factors have limited new recycling activities
- 02 insufficient capital to install new recycling equipment or implement new recycling practices
- 03 lack of technical information on recycling techniques applicable to this site's specific production processes
- ☒ 04 recycling is not economically feasible
- 05 concern that product quality may decline due to recycling
- 06 requirements to manifest waste inhibit shipments off-site
- 07 financial liability provisions inhibit shipments off-site
- 08 technical limits of product processes inhibit shipments
- ☒ 09 technical limits of production processes inhibit on-site recycling
- 10 permitting burdens prohibit recycling
- 11 lack of permitted recycling facilities
- 12 unable to identify a market for recyclable materials
- 13 other \_\_\_\_\_

additional comments:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



SITE ID # ARD 990660639  
NAME Cadmium Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART I

WASTE GENERATION AND MANAGEMENT

1. waste description DINOS33 (DI-NITROBUTYLPHENOL)

2. EPA/STATE waste code

P020  
\_\_\_\_\_  
\_\_\_\_\_

3. SIC  
code

2879

4. origin  
code

2

system  
type

M \_\_\_\_\_

5. source  
code

A 63

6. point of measurement

4

7. form code

B 3 0 1

8. RCRA-Radioactive mixed

1. YES ☒ 2. NO

3. DON'T KNOW

9. TRI CONSTITUENT

1. Site did not file TRI Report

☒ 2. Site filed a TRI Report; waste contains no TRI constituents

3. Site filed a TRI Report; waste contains TRI constituents

8. Don't know

IF WASTE CONTAINS TRI CONSTITUENTS, COMPLETE THIS SECTION  
BY LISTING TRI CONSTITUENTS INCLUDED IN THE WASTE.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)  
3,780,000 UOM P

11. Was this waste treated on-site, disposed of on-site, recycled on-site  
or discharged to a sewer/POTW?

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR  
EACH ON-SITE SYSTEM)

☒ 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

ON-SITE WASTE MANAGEMENT SYSTEMS

12. SYSTEM TYPE: M \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

OFF-SITE WASTE MANAGEMENT

13. TRANSPORTER EPA ID # LAD 034190215  
NAME C. H. Penn & Sons

ADDITIONAL TRANSPORTERS USED TO TRANSPORT THIS WASTE:

EPA ID # NA  
NAME \_\_\_\_\_

EPA ID # \_\_\_\_\_  
NAME \_\_\_\_\_

14. TREATMENT/STORAGE/DISPOSAL FACILITY

EPA ID # LAD 000777201 NAME Chemical Waste Mgmt  
ADDRESS Route 2, Box 1955 Brown CITY Carroll  
STATE LA ZIP 70663



SITE EPA ID # AR2 990660649  
NAME Cedar Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART II

OFF-SITE WASTE MANAGEMENT

15. SYSTEM TYPE SHIPPED TO: M 1 3 2

16. OFF-SITE AVAILABILITY CODE

☒ 1. OFF-SITE FACILITY IS COMMERCIAL FACILITY 3. DON'T KNOW  
☐ 2. OFF-SITE FACILITY IS RESTRICTED TO ONE COMPANY

17. QUANTITY OF THIS WASTE SHIPPED TO THIS TSD FACILITY IN 1991  
(IN POUNDS OR TONS)

3,780,000 UOM P

NEW WASTE MINIMIZATION ACTIVITY OCCURRING IN 1991 FOR THIS WASTE

☒ NO NEW WASTE MINIMIZATION IN 1991 (DO NOT COMPLETE ITEMS 18-21)

18. WASTE MINIMIZATION ACTIVITY CODES

W       W       W        
W       W       W      

19. OTHER EFFECTS DUE TO WASTE  
MINIMIZATION

☐ 1. YES ☐ 2. NO

20. QUANTITY RECYCLED IN 1991  
DUE TO NEW ACTIVITIES

                     UOM           

21. ACTIVITY/PRODUCTION INDEX

22. 1991 SOURCE REDUCTION QUANTITY

                     UOM           

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NON-HAZARDOUS OR NON-REGULATED SHIPMENTS

23. DID THIS SITE SHIP NON-HAZARDOUS OR NON-REGULATED WASTE TO A  
HAZARDOUS WASTE FACILITY IN 1991?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE FORM GM FOR NHAZ WASTE

24. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OUT OF STATE?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY

25. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED IN ARKANSAS?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY



1991 ANNUAL REPORT  
FORM GM  
PART I

1. waste description Flammable Liquid (Toluene/Kerosene)

5. source  
code

8. RCRA-Radioactive mixed  
 1. YES ☒ 2. NO  
 3. DON'T KNOW

1. Site did not file TRI Report  
2. Site filed a TRI Report; waste contains no TRI constituents  
☒ 3. Site filed a TRI Report; waste contains TRI constituents  
8. Don't know

1. Toluene, 00108-88-3 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)  
39640 UOM P

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR EACH ON-SITE SYSTEM)

X 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

12. SYSTEM TYPE: M	QUANTITY:	UOM
SYSTEM TYPE: M	QUANTITY:	UOM
SYSTEM TYPE: M	QUANTITY:	UOM

13. TRANSPORTER EPA ID # OND 980614374  
NAME Ross Transportation

EPA ID # NA EPA ID # \_\_\_\_\_  
NAME \_\_\_\_\_ NAME \_\_\_\_\_

EPA ID # OH0048415665 NAME ROSS INCINERATION  
ADDRESS 36790 GILES ROAD CITY GRAFTON  
STATE OH ZIP 44044



SITE EPA ID # AR29-066069  
NAME Cedar Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART II

OFF-SITE WASTE MANAGEMENT

15. SYSTEM TYPE SHIPPED TO: M O 4 1

16. OFF-SITE AVAILABILITY CODE

☒ 1. OFF-SITE FACILITY IS COMMERCIAL FACILITY 3. DON'T  
2. OFF-SITE FACILITY IS RESTRICTED TO ONE COMPANY KNOW

17. QUANTITY OF THIS WASTE SHIPPED TO THIS TSD FACILITY IN 1991  
(IN POUNDS OR TONS)

39,640 UOM P

NEW WASTE MINIMIZATION ACTIVITY OCCURRING IN 1991 FOR THIS WASTE

☒ NO NEW WASTE MINIMIZATION IN 1991 (DO NOT COMPLETE ITEMS 18-21)

18. WASTE MINIMIZATION ACTIVITY CODES

W       W       W        
W       W       W      

19. OTHER EFFECTS DUE TO WASTE  
MINIMIZATION

   1. YES    2. NO

20. QUANTITY RECYCLED IN 1991  
DUE TO NEW ACTIVITIES

   UOM   

21. ACTIVITY/PRODUCTION INDEX

22. 1991 SOURCE REDUCTION QUANTITY

   UOM   

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blank.

NON-HAZARDOUS OR NON-REGULATED SHIPMENTS

23. DID THIS SITE SHIP NON-HAZARDOUS OR NON-REGULATED WASTE TO A  
HAZARDOUS WASTE FACILITY IN 1991?

☒ 1. YES    2. NO IF YES, COMPLETE FORM GM FOR NHAZ WASTE

24. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OUT OF STATE?

☒ 1. YES    2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY

25. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED IN ARKANSAS?

☒ 1. YES    2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY



SITE ID # ARD 990660649  
NAME Cadillac Fairview Corp.

1991 ANNUAL REPORT  
FORM GM  
PART I

WASTE GENERATION AND MANAGEMENT

1. waste description 2 - ETHYL HEXYL CHLORIDE

2. EPA/STATE waste code

D001  
\_\_\_\_\_  
\_\_\_\_\_

3. SIC

code

2862

4. origin

code

1

system

type

M \_\_\_\_\_

5. source

code

A 37

6. point of measurement

1

7. form code

B 2 07

8. RCRA-Radioactive mixed

1. YES ☒ 2. NO

3. DON'T KNOW

9. TRI CONSTITUENT

1. Site did not file TRI Report

☒ 2. Site filed a TRI Report; waste contains no TRI constituents

3. Site filed a TRI Report; waste contains TRI constituents

8. Don't know

IF WASTE CONTAINS TRI CONSTITUENTS, COMPLETE THIS SECTION  
BY LISTING TRI CONSTITUENTS INCLUDED IN THE WASTE.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)

587,680

UOM P

11. Was this waste treated on-site, disposed of on-site, recycled on-site  
or discharged to a sewer/POTW?

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR  
EACH ON-SITE SYSTEM)

☒ 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

ON-SITE WASTE MANAGEMENT SYSTEMS

12. SYSTEM TYPE: M \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

OFF-SITE WASTE MANAGEMENT

13. TRANSPORTER EPA ID # MSD 003851409

NAME Hillier Transport

ADDITIONAL TRANSPORTERS USED TO TRANSPORT THIS WASTE:

EPA ID # ARD 981513385

NAME Lee's Trucking

EPA ID # \_\_\_\_\_

NAME \_\_\_\_\_

14. TREATMENT/STORAGE/DISPOSAL FACILITY

EPA ID # ARD 069748192

ADDRESS American Oil Road

STATE AR ZIP 71730

NAME Enso, Inc

CITY EL Dorado



SITE EPA ID # AR2 990660649NAME Cedar Chemical Corp.

1991 ANNUAL REPORT

FORM GM

PART II

## OFF-SITE WASTE MANAGEMENT

15. SYSTEM TYPE SHIPPED TO: M 0 4 1

16. OFF-SITE AVAILABILITY CODE

☒ 1. OFF-SITE FACILITY IS COMMERCIAL FACILITY☐ 3. DON'T  
KNOW☐ 2. OFF-SITE FACILITY IS RESTRICTED TO ONE COMPANY17. QUANTITY OF THIS WASTE SHIPPED TO THIS TSD FACILITY IN 1991  
(IN POUNDS OR TONS)587,680 UOM P

NEW WASTE MINIMIZATION ACTIVITY OCCURRING IN 1991 FOR THIS WASTE

☒ NO NEW WASTE MINIMIZATION IN 1991 (DO NOT COMPLETE ITEMS 18-21)

18. WASTE MINIMIZATION ACTIVITY CODES

W       W       W        
W       W       W      19. OTHER EFFECTS DUE TO WASTE  
MINIMIZATION☐ 1. YES ☐ 2. NO20. QUANTITY RECYCLED IN 1991  
DUE TO NEW ACTIVITIES                     UOM           

21. ACTIVITY/PRODUCTION INDEX

22. 1991 SOURCE REDUCTION QUANTITY

                     UOM           This block intentionally left  
blank.

## NON-HAZARDOUS OR NON-REGULATED SHIPMENTS

23. DID THIS SITE SHIP NON-HAZARDOUS OR NON-REGULATED WASTE TO A  
HAZARDOUS WASTE FACILITY IN 1991?☒ 1. YES ☐ 2. NO IF YES, COMPLETE FORM GM FOR NHAZ WASTE

24. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OUT OF STATE?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY

25. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED IN ARKANSAS?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY



SITE ID # ARD 990660649  
NAME Cedar Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART I

WASTE GENERATION AND MANAGEMENT

1. waste description Mesityl Oxide (Propanil)

2. EPA/STATE waste code

D001  
\_\_\_\_\_  
\_\_\_\_\_

3. SIC  
code

2879

4. origin  
code

1

system  
type

M \_ \_ \_

5. source  
code

A 37

6. point of measurement

1

7. form code

B 201

8. RCRA-Radioactive mixed

1. YES X 2. NO

3. DON'T KNOW

9. TRI CONSTITUENT

1. Site did not file TRI Report

X 2. Site filed a TRI Report; waste contains no TRI constituents

3. Site filed a TRI Report; waste contains TRI constituents

8. Don't know

IF WASTE CONTAINS TRI CONSTITUENTS, COMPLETE THIS SECTION  
BY LISTING TRI CONSTITUENTS INCLUDED IN THE WASTE.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)

139,625 UOM P

11. Was this waste treated on-site, disposed of on-site, recycled on-site  
or discharged to a sewer/POTW?

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR  
EACH ON-SITE SYSTEM)

X 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

ON-SITE WASTE MANAGEMENT SYSTEMS

12. SYSTEM TYPE: M \_ \_ \_

SYSTEM TYPE: M \_ \_ \_

SYSTEM TYPE: M \_ \_ \_

QUANTITY: \_\_\_\_\_

QUANTITY: \_\_\_\_\_

QUANTITY: \_\_\_\_\_

UOM \_\_\_\_\_

UOM \_\_\_\_\_

UOM \_\_\_\_\_

OFF-SITE WASTE MANAGEMENT

13. TRANSPORTER EPA ID # ARD 981513385

NAME LEIS TRUCKING

ADDITIONAL TRANSPORTERS USED TO TRANSPORT THIS WASTE:

EPA ID # ARD 069748192

NAME Enso, Inc.

EPA ID # \_\_\_\_\_

NAME \_\_\_\_\_

14. TREATMENT/STORAGE/DISPOSAL FACILITY

EPA ID # ARD 069748192

ADDRESS American Oil Road

STATE AR

ZIP 71730

NAME Enso, Inc.

CITY El Dorado



SITE ID # ARD 990660649  
NAME CARD Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART I

WASTE GENERATION AND MANAGEMENT

1. waste description CYPERMETHRIN WASTEWATER

2. EPA/STATE waste code

D001  
\_\_\_\_\_  
\_\_\_\_\_

3. SIC  
code

2879

4. origin  
code

1

system  
type

M \_\_\_\_\_

5. source  
code

A 37

6. point of measurement

1

7. form code

B 203

8. RCRA-Radioactive mixed

1. YES ☒ 2. NO

3. DON'T KNOW

9. TRI CONSTITUENT

1. Site did not file TRI Report

☒ 2. Site filed a TRI Report; waste contains no TRI constituents

3. Site filed a TRI Report; waste contains TRI constituents

8. Don't know

IF WASTE CONTAINS TRI CONSTITUENTS, COMPLETE THIS SECTION  
BY LISTING TRI CONSTITUENTS INCLUDED IN THE WASTE.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)

6,490,140 UOM P

11. Was this waste treated on-site, disposed of on-site, recycled on-site  
or discharged to a sewer/POTW?

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR  
EACH ON-SITE SYSTEM)

☒ 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

ON-SITE WASTE MANAGEMENT SYSTEMS

12. SYSTEM TYPE: M \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

SYSTEM TYPE: M \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

OFF-SITE WASTE MANAGEMENT

13. TRANSPORTER EPA ID # ARD 983272675

NAME CLUB WASTE TRANSPORT

ADDITIONAL TRANSPORTERS USED TO TRANSPORT THIS WASTE:

EPA ID # MOD 006968101

NAME UNION PACIFIC RR

EPA ID # TXD 981153364

NAME PORT TERMINAL RR ASSN.

14. TREATMENT/STORAGE/DISPOSAL FACILITY

EPA ID # TXD 097673149

ADDRESS 2759 BATTLEGROUND RD

STATE TX ZIP 77536

NAME EMPAK, Inc.

CITY DEER PARK



SITE EPA ID # ARD 990 G60649NAME Cedar Chemical Corp.

1991 ANNUAL REPORT

FORM GM

PART II

## OFF-SITE WASTE MANAGEMENT

15. SYSTEM TYPE SHIPPED TO: M 1 3 4

16. OFF-SITE AVAILABILITY CODE

☒ 1. OFF-SITE FACILITY IS COMMERCIAL FACILITY☐ 3. DON'T  
KNOW☐ 2. OFF-SITE FACILITY IS RESTRICTED TO ONE COMPANY17. QUANTITY OF THIS WASTE SHIPPED TO THIS TSD FACILITY IN 1991  
(IN POUNDS OR TONS)6,490,140UOM P

NEW WASTE MINIMIZATION ACTIVITY OCCURRING IN 1991 FOR THIS WASTE

☒ NO NEW WASTE MINIMIZATION IN 1991 (DO NOT COMPLETE ITEMS 18-21)

18. WASTE MINIMIZATION ACTIVITY CODES

W      W      W      W      W      W      19. OTHER EFFECTS DUE TO WASTE  
MINIMIZATION☐ 1. YES ☐ 2. NO20. QUANTITY RECYCLED IN 1991  
DUE TO NEW ACTIVITIESUOM   

21. ACTIVITY/PRODUCTION INDEX

22. 1991 SOURCE REDUCTION QUANTITY

UOM   This block intentionally left  
blank.

## NON-HAZARDOUS OR NON-REGULATED SHIPMENTS

23. DID THIS SITE SHIP NON-HAZARDOUS OR NON-REGULATED WASTE TO A  
HAZARDOUS WASTE FACILITY IN 1991?☒ 1. YES ☐ 2. NO IF YES, COMPLETE FORM GM FOR NHAZ WASTE

24. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OUT OF STATE?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY

25. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED IN ARKANSAS?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE  
SURVEY



SITE EPA ID # AR2 990 660 649  
NAME Cedar Chemical Corp.

1991 ANNUAL REPORT  
FORM GM  
PART II

OFF-SITE WASTE MANAGEMENT

15. SYSTEM TYPE SHIPPED TO: M 0 4 2

16. OFF-SITE AVAILABILITY CODE

☒ 1. OFF-SITE FACILITY IS COMMERCIAL FACILITY  
☐ 2. OFF-SITE FACILITY IS RESTRICTED TO ONE COMPANY ☐ 3. DON'T KNOW

17. QUANTITY OF THIS WASTE SHIPPED TO THIS TSD FACILITY IN 1991  
(IN POUNDS OR TONS)

47,998 UOM P

NEW WASTE MINIMIZATION ACTIVITY OCCURRING IN 1991 FOR THIS WASTE

☒ NO NEW WASTE MINIMIZATION IN 1991 (DO NOT COMPLETE ITEMS 18-21)

18. WASTE MINIMIZATION ACTIVITY CODES

W       W       W        
W       W       W      

19. OTHER EFFECTS DUE TO WASTE MINIMIZATION

☐ 1. YES ☐ 2. NO

20. QUANTITY RECYCLED IN 1991  
DUE TO NEW ACTIVITIES

UOM   

21. ACTIVITY/PRODUCTION INDEX

22. 1991 SOURCE REDUCTION QUANTITY

UOM   

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NON-HAZARDOUS OR NON-REGULATED SHIPMENTS

23. DID THIS SITE SHIP NON-HAZARDOUS OR NON-REGULATED WASTE TO A HAZARDOUS WASTE FACILITY IN 1991?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE FORM GM FOR NHAZ WASTE

24. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OUT OF STATE?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE SURVEY

25. WAS NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED IN ARKANSAS?

☒ 1. YES ☐ 2. NO IF YES, COMPLETE THE NON-HAZARDOUS WASTE SURVEY



1991 ANNUAL REPORT  
FORM GM  
PART I

1. waste description PERMETHRIN / CYPERMETHRIN

3. SIC  
code  
2879

4. origin  
code  
1

system  
type

5. source  
code  
A 09

6. point of measurement  
1

7. form code  
B 4 0 2

8.RCRA-Radioactive mixed  
 \_\_\_1. YES X 2. NO  
 \_\_\_3. DON'T KNOW

☐ 1. Site did not file TRI Report  
☒ 2. Site filed a TRI Report; waste contains no TRI constituents  
☐ 3. Site filed a TRI Report; waste contains TRI constituents  
☐ 8. Don't know

IF WASTE CONTAINS TRI CONSTITUENTS, COMPLETE THIS SECTION  
BY LISTING TRI CONSTITUENTS INCLUDED IN THE WASTE.

1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

10. Quantity of this waste generated in 1991 (in pounds or tons)  
47,798 UOM P

11. Was this waste treated on-site, disposed of on-site, recycled on-site or discharged to a sewer/POTW?

1. YES (COMPLETE THE ON-SITE MANAGEMENT SECTION AND A FORM PS FOR EACH ON-SITE SYSTEM)  
X 2. NO (CONTINUE TO OFF-SITE SHIPMENT QUESTIONS)

12. SYSTEM TYPE: M \_ \_ \_  
SYSTEM TYPE: M \_ \_ \_  
SYSTEM TYPE: M \_ \_ \_

QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_  
 QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_  
 QUANTITY: \_\_\_\_\_ UOM \_\_\_\_\_

13. TRANSPORTER EPA ID # ARD 981513385  
NAME LEGIS TRUCKING

ADDITIONAL TRANSPORTERS USED TO TRANSPORT THIS WASTE:

EPA ID # \_\_\_\_\_  
NAME \_\_\_\_\_

EPA ID # \_\_\_\_\_  
NAME \_\_\_\_\_

#### 14. TREATMENT/STORAGE/DISPOSAL FACILITY

EPA ID # ARD 069748192  
ADDRESS AMERICAN OIL  
STATE AR ZIP 71730

NAME FENSCO, Inc.  
CITY EL DORADO



SITE EPA ID # ARD 990660649  
NAME CDAR Chemical Corp.

1991 ANNUAL REPORT  
NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE SURVEY FORM

1. DESCRIBE THE TYPE OF NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OFF-SITE:

DICHLOROANILINE Bottom Distillation Residue  
And Head Lights

AMOUNT SHIPPED 1,024,960 P

RECEIVING FACILITY NAME CHEMICAL WASTE MGMT - CARLYSS, LA  
ADDRESS BRYSAN - MEMPHIS, TN  
ENSER - EL DORADO, AR

2. DESCRIBE THE TYPE OF NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OFF-SITE:

DI - ETHYL HEXYL PHOSPHORIC ACID WASTEWATER

AMOUNT SHIPPED 4,868,440 P

RECEIVING FACILITY NAME ROLLINS  
ADDRESS P.O. Box 74137  
BATON ROUGE, LA

3. DESCRIBE THE TYPE OF NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OFF-SITE:

1 - (CARBOETHOXY) ETHYL 3 - [2-CHLORO-4-  
(TRIFLUOROMETHYL) PHENOXY] - BENZOATE (CTBL)

AMOUNT SHIPPED 448,300 P WASTEWATER

RECEIVING FACILITY NAME ROLLINS  
ADDRESS P.O. Box 74137  
BATON ROUGE, LA

4. DESCRIBE THE TYPE OF NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OFF-SITE:

AMP / ZAG / TA WASTEWATER

AMOUNT SHIPPED 7,315,360 P

RECEIVING FACILITY NAME ENRAK, Inc.  
ADDRESS 2759 BATTLEGROUND RD.  
DEER PARK, TX 77536

5. DESCRIBE THE TYPE OF NON-HAZARDOUS OR NON-REGULATED WASTE SHIPPED OFF-SITE:

AMOUNT SHIPPED \_\_\_\_\_

RECEIVING FACILITY NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_



Mr. Joe Hoover  
February 24, 1992  
Page Three

above. We would expect to fax a proposed draft of such an Amended Order to you by Wednesday.

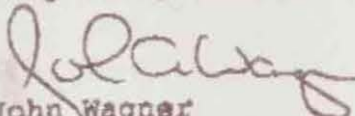
The principal purpose of the meeting which we have requested on Thursday is to expedite the entry of an Order that will provide a basis for Cedar and Wormald to proceed immediately with the interim remedial measures described above. Since we expect to have a sharing agreement with Wormald in place by Thursday, and since we also expect that Wormald will be named a respondent in the amended Order, by consent, it is my expectation that Wormald's attorneys would also attend the meeting.

Notice of Deficiencies

The second purpose of the meeting is to review the Department's Notice of Deficiencies which you forwarded to me by letter of February 10, 1992. It is our intention to submit a written response to the notice within thirty days of our receipt as required by the CAO, but I believe that our meeting, which will include Jeff Bennett with ENSAFE (who is primarily responsible for preparing the Preliminary Report and Work Plan) will facilitate a response that will be acceptable to the Department without the need for further discussions. This portion of the meeting would consist primarily of a review of your comments so that we and ENSAFE will understand the rationale for some of the changes that have been requested.

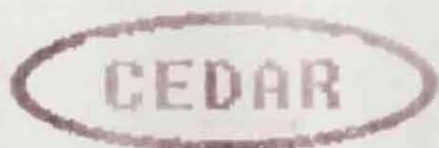
Please call me today to confirm the date and time for the meeting.

Very truly yours,

  
John Wagner

JW:jgw





Chemical Corporation

P.O. Box 2749  
West Helena, AR 72390  
Voice: 501-572-3701  
Fax: 501-572-3795

To: Hazardous Waste

From: JOHN WAGNER

Attn: Jore Hoover

Date: 24 Feb 92

Fax:

Pages: B + Cover

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Message:

**CEDAR CHEMICAL CORPORATION**

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390

(501) 572-3701 • Fax No. 501-572-3795

February 24, 1992

Mr. Joe Hoover  
Enforcement Administrator  
Hazardous Waste Division  
Arkansas Department of Pollution  
Control & Ecology  
8001 National Drive  
Little Rock, Arkansas 72219-8913

VIA FAX  
(501) 562-4632

Re: West Helena Plant  
Consent Administrative Order  
No. LIS 91-118

Dear Joe:

This letter will confirm our request for a meeting to discuss two matters relating to the referenced CAO, in accordance with our telephone conversation last week and in a subsequent telephone conversation between our attorney, Allen Malone, and Mike Bates on Friday, February 21, 1992. Mike has asked that we confirm the purpose for the meeting in writing by fax and he indicated that he would attempt to arrange a meeting on Thursday, February 27, 1992, to be attended by Jeff Bennett with Environmental Safety & Design, Inc., me and by you and other appropriate department representatives.

Suspected Additional Drum Burial Areas

As you know, Cedar has filed suit against Wormald U.S., Inc. as successor to The Ansul Company for contribution to the costs incurred by Cedar pursuant to the CAO. In the course of discovery depositions in that case, it was learned that there may be an additional drum burial area that was used for disposal of dinoseb products manufactured at the plant in 1972. The drum disposal area was reported to be near the one which Cedar recently excavated in accordance with Paragraph 10.a of the CAO.



Mr. Joe Hoover  
February 24, 1992  
Page Two

In response to this information, Cedar retained Groundwater Services, Inc. of Houston, Texas to carry out a geophysical survey in the area where the additional drum burial area is reportedly located. I expect to have a final report of the results of this survey in hand later this week. I am enclosing a contour map which was developed from the survey, using an EM-31 conductivity tool, which indicates two anomalies in the immediate area of the first drum burial pit which was discovered. Soil samples taken from hand auger borings indicated the presence of contaminants, particularly in the center of each of the two locations. Field notes with OVA analytical results are enclosed. Soil samples taken from both locations have been analyzed by Cedar's laboratory and determined to contain dinoseb at 90 parts per million and 170 parts per million at levels of six feet and ten feet respectively.

We have reviewed the results of this investigation with Wormald's attorneys, and we expect to enter into an Interim Cost Sharing Agreement with Wormald shortly whereby Wormald will pay for or contribute to the cost of implementing a drum removal plan virtually identical to the Removal Plan referred to in Paragraph 7.g of the CAO.

Contingent only on Cedar's reaching an Interim Cost Sharing Agreement with Wormald (which we expect will have occurred by mid-week), Cedar's plan is to retain ENRAC, a division of Chemical Waste Management, Inc. to undertake remediation of these additional suspected drum burial pits in substantially the same manner as described in ENRAC's final report dated January 15, 1992, which we submitted to you earlier this year in accordance with Paragraph 10.c of the CAO. As before, it would be our intention to have ENRAC remove all empty drums and contaminated soil from the pits and transport them to ENRAC's hazardous landfill facility in Carlyss, Louisiana. Any liquid hazardous wastes remaining in drums recovered from the pits would be disposed of by incineration.

ENRAC is prepared to mobilize and begin implementing the additional remediation referred to above on or about March 1, 1992. It is critical that the work on this project begin promptly in order that all dinoseb contaminated soil removed from the pits can be transferred to the Carlyss, Louisiana facility prior to May 8, 1992, the effective date of the land disposal restrictions. Wormald's financial participation prior to a final settlement of Cedar's suit is premised on our ability to complete the project by this deadline. It is also understood that an Addendum to the CAO would be entered in which both Cedar and Wormald would be directed to implement the additional interim remedial measures described





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• **NETA ENCLAVE**



MANAGEMENT, Inc.

Small Group: 75 min

CEDAR

19.95

1994

**CHECKED BY:** [Signature]

WEST MEDICAL PLANT

MANUFACTURING DATE: 11/10/00

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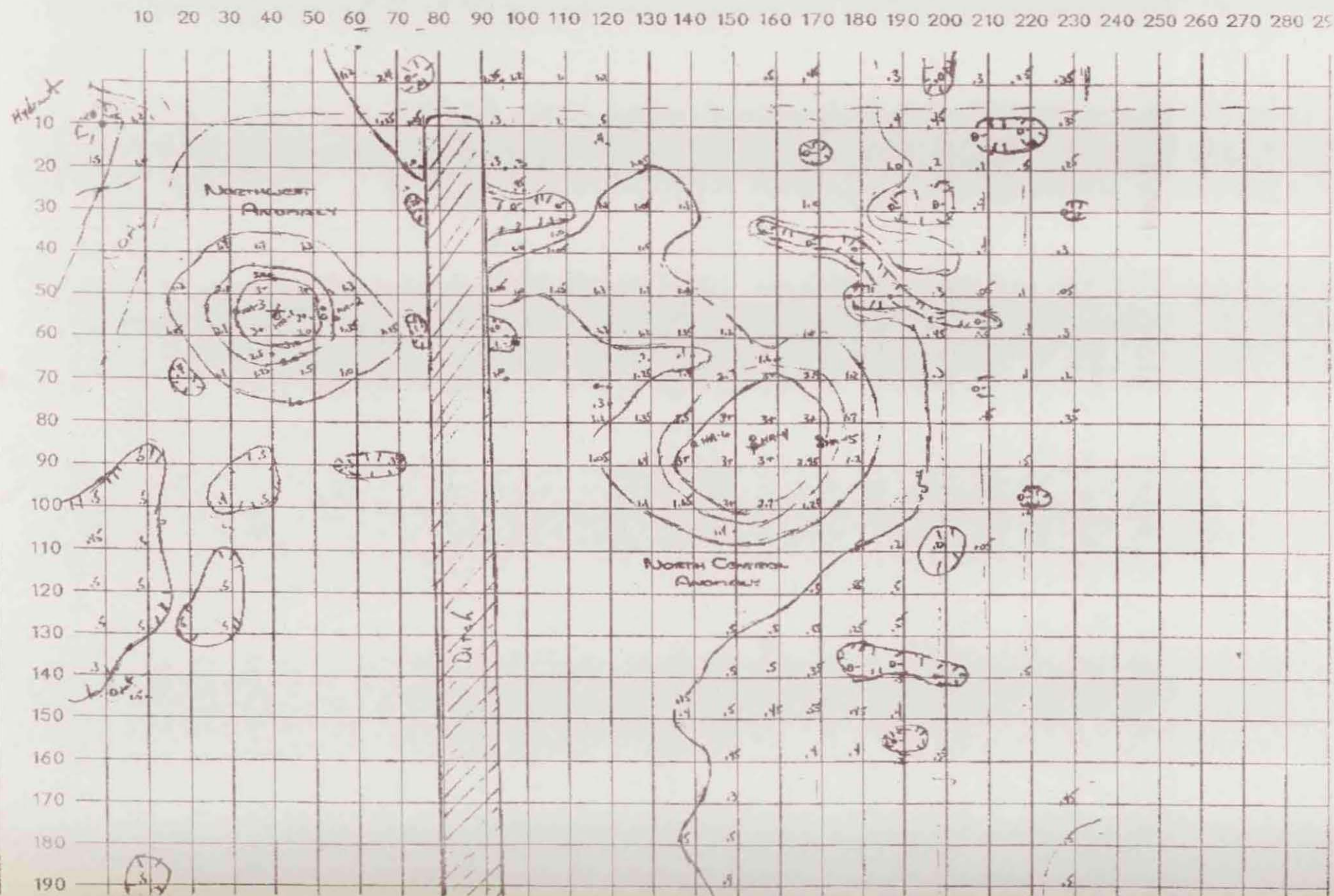
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[illegible]







**Groundwater  
Services, Inc.**  
Houston, Texas

PROJECT: CEDAR soil  
sampling

GSJ JOB NO. G-1322

BY: MP MARCIN

CK'D BY: \_\_\_\_\_

PAGE 1 OF 3

DATE: 2/19/92

DATE: \_\_\_\_\_

LOCATION HA-1  
COORD. 42'E 55'S

| DEPTH (ft.) | OVA (ppm) | LITHOLOGY                                   |
|-------------|-----------|---|
| 1           | 0         | brown silty loam FILL                       |
| 2           | 0         | "   |
| 3           | 2         | "   |
| 4           | 100       | Gray green silty loam (Black discoloration) |
| 5           | >1000     | rock & tar material                         |
| 5.5         | 300       | "   |

LOCATION HA-2  
COORD 52'E 55'S to 3.5 ft.; 52'E 53'S to 4.0 ft.; 55'E 55'S to 10'

| DEPTH (ft.) | OVA headspace (ppm) | LITHOLOGY                          |
|-------------|---------------------|------------------------------------|
| 1           | 0                   | brown silty loam FILL              |
| 2           | 5                   |                                    |
| 3           | 10                  |                                    |
| 4           | 100                 | grayish green coloration           |
| 5           | 60                  |                                    |
| 6           | 100                 |                                    |
| 7           | 650                 | with black tar and yellow material |
| 8           | 800                 |                                    |
| 9           | 550                 |                                    |
| 10          | 650                 | increased rock & gravel            |





# Groundwater Services, Inc.

Houston, Texas

PROJECT: CEDAR SoilGSI JOB NO. G-1322PAGE 2 OF 3BY: M.P. MARCINDATE: 2/10/92Sampling

CK'D BY: \_\_\_\_\_

DATE: \_\_\_\_\_

LOCATION HA-3Coord.: 32°E 54'S

| DEPTH | OVA | LITHOLOGY                                       |
|-------|-----|---|
| 1     | 0   | brown silty loam FILL                           |
| 2     | 0   |   |
| 3     | 25  |   |
| 4     | 800 | greenish gray coloration w black tarry material |
| 5     | 250 | Rock & gravel material below 4.5 ft.            |

LOCATION HA-4Coord.: 155E 85S to 4ft 155E 83S to 7ft.

| DEPTH | OVA | LITHOLOGY   |
|-------|-----|---|
| 1     | 1   | brown silty loam FILL                               |
| 2     | 0   |   |
| 3     | 3   |   |
| 4     | 6   |   |
| 5     | 120 | gray coloration below 4.5 ft.<br>with black streaks |
| 6     | 100 |   |
| 7     | 70  | with significant black tar material in sample       |



Groundwater  
Services, Inc.  
Houston, Texas

GSI JOB NO. G-1322PAGE 3 OF 3PROJECT: CEDAR SoilBY: M.P. MARCINDATE: 2/19/92Sampling

CK'D BY: \_\_\_\_\_

DATE: \_\_\_\_\_

LOCATION HA-5Coord.: 170'E 85'S to 215'; 170'E 83'S

| DEPTH(ft.) | OVA (ppm) | LITHOLOGY   |
|------------|-----------|---|
| 1          | 0         | brown silty loam FILL                             |
| 2          | 1         |   |
| 2.5        | 1         |   |
| 3          | 9         | with minor black tr & yellow crystalline material |

LOCATION HA-6Coord.: 140'E 85'S

| DEPTH(ft.) | OVA (ppm) | LITHOLOGY             |
|------------|-----------|-----------------------|
| 1          | 1         | brown silty loam FILL |
| 2          | 2         |                       |
| 3          | 1         |                       |



HW-CW-3H-2-10-92

P 762, 178, 992



# Certified Mail Receipt

No Insurance Coverage Provided

Do not use for International Mail

(See Reverse)

|  |                |
|--|----------------|
| Sent to <b>JOHN WAGNER</b>                                 |                |
| <b>CEDAR CHEMICAL CORP.</b>                                |                |
| Street & No.   |                |
| <b>P.O. BOX 2749</b>                                       |                |
| P.O., State & ZIP Code                                     |                |
| <b>West HELENA, AR 72390</b>                               |                |
| Postage  | <b>\$ 75</b>   |
| Certified Fee  | <b>1.00</b>    |
| Special Delivery Fee                                       |                |
| Restricted Delivery Fee                                    |                |
| Return Receipt Showing to Whom & Date Delivered            |                |
| Return Receipt Showing to Whom Date, & Address of Delivery | <b>1.00</b>    |
| TOTAL Postage & Fees                                       | <b>\$ 2.75</b> |
| Postmark or Date   |                |



PS Form 3800, June 1990

**STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,  
CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see front).**

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).
2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to the back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.

☆ U.S.G.P.O. 1990-270-153



HW-cw-5H-2-10-92

**SENDER:**

- Complete items 1 or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also ☐ to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. John Wagner  
Cedar Chemical Corporation  
P.O. Box 2749  
West Helena, AR 72390

4a. Article Number

P 962-178-992

4b. Service Type

- |   |  |
|---|--|
| <input type="checkbox"/> Registered           | <input type="checkbox"/> Insured                                   |
| <input checked="" type="checkbox"/> Certified | <input type="checkbox"/> COD                                       |
| <input type="checkbox"/> Express Mail         | <input checked="" type="checkbox"/> Return Receipt for Merchandise |

7. Date of Delivery

2-12-92

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

*John Wagner*

United States Postal Service

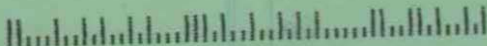
Official Business



PENALTY FOR PRIVATE  
USE, \$300

Print your name, address and ZIP Code here

ARKANSAS DEPARTMENT OF  
POLLUTION CONTROL & ECOLOGY  
8001 NATIONAL DRIVE  
P.O. BOX 2913  
LITTLE ROCK, AR 72219-8913







STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-4632



Certified Mail Return Receipt  
P 762 178 992

February 10, 1992

Mr. John Wagner  
Cedar Chemical Corporation  
P.O. Box 2749  
West Helena, Ar 72390

RE: Report of Current Conditions and Workplan  
Notice of Deficiencies

Dear Mr. Wagner:

The Department reviewed the Report of Current Conditions and the Workplan dated October, 1991 and determined the plans to be incomplete. The deficiencies are listed in the attached Notice of Deficiencies (N.O.D.).

In order for the Department to proceed with the review of the Report of Current Conditions and the Workplan, the revised reports (3 copies) must be received within thirty (30) days of the receipt of this letter. If the revised plans are inadequate for approval upon resubmittal, they will be modified, if possible, and public noticed for approval.

Sincerely,

Joe Hoover  
Enforcement Administrator  
Hazardous Waste Division

# 54-0068  
CSN.....  
PERMIT NO #.....  
HAZARDOUS WASTE-SORT:  
PERMIT/COMPLIANCE/SUPERFUNDS

cc: Mike Bates, Chief, HWD  
Phillip Murphy, HWD  
Jerry Williams, HWD  
David Hartley, HWD  
Allen T. Malone, Apperson, Crump, Duzane & Maxwell

PM:cw cedar.204

enclosure



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
January 23, 1992

Maps

A number of maps required in the scope of work for a facility investigation at Cedar Chemical Corporation, as referenced by CAO LIS 91-118 are not included. These include:

1. General geographic location map.
2. Map showing the owners of the adjoining property.
3. Surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns and NPDES outfalls.
4. Map showing all utilities, paved areas, easements and piping.
5. Maps should show locations of SWMUs and the location of all yellow stained areas. The map should show storage, treatment and disposal facilities currently in use for solid wastes.
6. Map with location of all production wells, monitoring wells, piezometer and private water wells.
7. Locations of all previous environmental investigations.
8. Locations of spills, date and type of material.
9. Regional geologic map(s) to support the regional geologic units in Paragraph 2.3.2. Structural cross sections may be necessary to make this demonstration and should be included.
10. Map showing any past and present underground storage tanks.

Section 2.1 Site Description

1. It is stated that there are no domestic wells within one mile of the facility. Sufficient documentation is not presented to support this statement. It is recommended that documentation be provided that identifies all landowners, within a reasonable radius around the facility, who were contacted and interviewed to determine if any wells are present, being used, have potential for use or plan to install wells for any purpose. This is essential data to fully complete the investigation of ground water contamination. Contamination is known to exist in down gradient wells adjacent to the property line. This data will be the basis for notifying landowners of the potential for contamination and contacts to gain access to property for investigative and remedial purposes. If this data does not exist, it is appropriate to include this task in the workplan.



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
January 23, 1992

2.2 Site History

1. Describe solid wastes generated during the production of the finished chemicals produced at the Cedar Chemical site during the life of the plant. The description should include a list of the solid wastes generated during the production of the chemicals and any hazardous substances generated during the treatment or disposal of the solid waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of by the facility. A detailed chemical analysis should be submitted for each waste stream generated. The report should include a list of all raw materials used, intermediate products, and finished products used or produced during the life of the plant.
2. The description of the ponds used to dispose of waste during the time period 1971 to 1973 should contain a description of the waste disposed of in the ponds. The description should contain a list of the chemical constituents disposed of in the ponds.

Section 2.2.2 Solid and Hazardous Waste

1. Provide a discussion of past RCRA activities and RCRA wastes managed at the facility.
2. In Table 2.1, include hazardous waste codes, volume and process that generates all hazardous wastes.

Sections 3.1.2 Surface Water

1. Provide greater detail on the investigation and the findings of the investigation on the biological treatment system which were done under the previous CAO. The analysis of the sludge from all of the impoundments including the location and depth of the samples must be included for reference to evaluate the release potential of these units.

Section 3.1.3 Soil Pathway

1. Provide reference to samples taken from the Biological treatment system under previous CAO. Information is relevant to soil contamination.

Section 3.1.4 Ground Water Pathway

1. Upper low permeability zones would tend to retard vertical migration of contaminants; however, it is noted that well cluster (MW6, MW6A, MW6B, MW6C) indicate highest concentrations in the upper (B and C) zones. The

Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
January 23, 1992

potential for ground water contamination is apparent and is known to exist. Sufficient data has not been collected to characterize all zones of contamination at the site.

Section 3.2 Possible Sources of Contamination

1. Indicate status of all SWMUs identified in RFA performed in January, 1988 by A. T. Kearney, Inc. and The Earth Technology Corporation for the U. S. Environmental Protection Agency.
2. Provide the approximate date the drums in the drum vault were placed in the drum vault.

Appendix A

1. Include construction documentation for monitoring wells and designate correct well numbers.

Appendix B

1. Include discharges that led to previous CAO including volume of wastes.



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Workplan  
January 23, 1992

Preface

1. The primary purpose of the FIWP is to determine if hazardous constituents have been released from SWMUs as stated; however, it is necessary to evaluate the nature and extent of all contaminants released from these units including "non-hazardous" constituents such as sulfates and nitrates.

Section 1.2.2

1. The initial samples collected at the facility are proposed to be analyzed for volatile organic compounds, semi-volatile organic compounds, chlorinated pesticides and chlorinated herbicides. It is necessary to expand the parameter list to include primary drinking water standards (Appendix III), secondary drinking water standards and other constituents representative of facility waste streams. At a minimum, the following constituents must be added to the proposed parameters: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, chloride, fluoride, nitrate, sulfate, ammonia, sodium and cyanide. These additional parameters are necessary in the ground water monitoring program to evaluate background conditions in order to fully evaluate the facility's impact on ground water quality.

Section 1.2.6

1. Elaborate on head space analysis technique and criteria for additional organic analysis of soil samples.
2. Soil boring cores should be split in two, photographed, and visually logged. Samples should also be obtained for physical properties analysis (grain size and Atterburg limits). Samples for physical properties should be obtained at least at every change in lithology and soils with more than 50% passing a No. 200 sieve need Atterburg limits testing. Coarser soils (less than 50% passing a No. 200 sieve) need grain size analysis and Atterburg limits utilizing dual classification in the Unified Soil Classification System except when the sample contains less than 5% passing the number 200 sieve. Continuous cores are recommended in this boring program to assure an adequate number of samples can be obtained. Include provisions for handling, storage, analysis, and disposal of cuttings.
3. Include provisions to allow an adequate amount of time to establish ground water level before installing well. ADPC&E recommends that the boreholes be left open for 24 hours before well installation to evaluate perched water conditions. The same protocols stated in comments to Section 1.2.6.2 should be utilized for sampling these boreholes.



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Workplan  
January 23, 1992

4. Include provisions for containing, analysis, storage and disposal of water purged from the wells.
5. The non-aqueous phase liquid testing shall be done independent of photoionization detector (PID) readings.
6. Include provisions to establish proper flow rate for sampling when bladder pumps are used.

Section 1.3.1

1. In this section, the facility has proposed a ground water monitoring plan. The facility apparently does not understand the purpose of this section of the work plan. This section would more appropriately be titled Ground Water Quality Assessment Plan and should be capable of doing just that. This plan must go beyond installation of additional wells and sampling for one year. It should establish criteria when additional work is required with a logical approach of determining the nature of contamination, horizontal and vertical extent of contamination, and develop a sufficient data base to enter into a corrective action plan if necessary. The additional parameters listed in comment on Section 1.2.2 are necessary in this ground water monitoring program.

Section 1.3.2

1. Submit any data that shows air releases are not a significant contaminant pathway for the wastewater treatment area (SWMU 63, 64, 65, 68). If no data is available, the work plan must contain a plan for air monitoring around the wastewater treatment area.
2. The workplan must include a sample of the sludge in the active wastewater treatment facility. The workplan should include a complete TC scan.
3. In a citizens complaint investigation, No. 78C0118, the complaint report indicated a rupture of a sewer line for process wastewater. The workplan must investigate the soils in area of the release. The workplan must also detail how any underground sewer lines will be investigated for possible releases.
4. During the site visit of December 11, 1991, a soil stain from a spill of the organic layer from the API separator was observed going into a ditch. The workplan must include soil samples from the area stained by spills and from the ditch where the spill entered the stream.



Cedar Chemical Corporation  
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Facility Investigation Workplan  
January 23, 1992

5. During the site visit of December 11, 1991, Cedar personnel stated the tank located near the compressor house in the wastewater treatment area was used to hold process waste from the propanil process. It was also noted that the tank leaked. The workplan must include soil sampling around the tank.

Section 1.3.3

1. Submit any data that shows air releases are not a significant contaminant pathway for the closed surface impoundments (SWMU 69, 70, 71). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.
2. The workplan should contain a plan to monitor the surface water runoff from the closed surface impoundments, area of concern number one, and the railroad loading area.
3. The work plan must include soil samples of the soils in the closed impoundments. A grid system with a random sampling method must be proposed to survey the condition of the soils. Soil borings must be included in the investigation of the closed impoundments.

Section 1.3.4

1. Submit any data that shows air releases are not a significant contaminant pathway for the storm water system (SWMU 59, 60). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.
2. During the site visit of December 11, 1991, Cedar personnel stated the storm water pond had been dredged on at least two occasions. The dredge material from the ponds was used as fill for the area around the storm water ponds. The workplan must include soil borings of the soils around the storm water pond. The workplan must include provisions to analyze the soils from the borings for chemicals used or produced during the life of the plant.
3. Cedar must investigate sediments in the receiving stream for NPDES outfall 001. The workplan must include a sampling plan for the investigation of the sediments in the receiving stream.

Section 1.3.6

1. The design of the drum vault located in the foundation of maintenance services warehouse is unknown; therefore, its ability to contain a release is unknown. ADPC&E recommends that the plan include a provisions to sample soils within the vault by drilling hole(s) through



Cedar Chemical Corporation  
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Facility Investigation Workplan  
January 23, 1992

the foundation. There remains a possibility that these drums may contain liquid and the vault was not designed so that liquids could be removed. If wastes are to be left in place this unit must have a plan for long term monitoring because the existing monitoring wells are not adequately located for the immediate detection of a release into the ground water.

2. Cedar must make a grid system in areas where yellow staining is not evident. A sample should be taken randomly from each of the grids. The samples shall not be composited. The soil samples should be analyzed for volatile and semi-volatile organics, pesticides, and heavy metals. If a detectable concentration of any of the TC constituents listed in 40 CFR 261.24 is found above normal background level, Cedar must perform a TC analysis for that constituent.
3. Provide a map showing all areas with visible soil staining. All areas with visible yellow staining must be sampled.
4. It was reported in the Ecology and Environment memo (July 29, 1986) that the yellow stained areas contained buried drums and this possibility must be investigated. Cedar must present a method in the workplan to determine if buried drums exist in the yellow stained areas.

SWMUs not in Workplan

1. The workplan should include a strategy to investigate the condition of the concrete sumps and drainage channels in the current production areas. The workplan should include a requirement for a certification from an independent registered engineer of the condition of the concrete sumps and ditches.
2. The facility should investigate the drum crushing area, SWMU 47.
3. Cedar should investigate the waste oil drum, SWMU 51.
4. Cedar must investigate soils in the lowland area on the south west side of the wastewater treatment area.

Section 1.4.1.2

1. The Waste Analysis Plan for soils should be expanded to include analysis for cyanide and heavy metals.
2. The Waste Analysis Plan must include a procedure to obtain a background soil sample. The background soil sample shall be analyzed for heavy metals.



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Workplan  
January 23, 1992

3. The work plan must provide a mechanism for written notification of ADPC&E at least five days prior to a sampling event to provide ADPC&E an opportunity to obtain split samples.

Section 1.4.7

1. The analytical section of the workplan must indicate that Cedar will report any concentrations of organics not listed on the target chemical list indicated during the analysis of any soil, water or air samples analyzed during the RFI. If Cedar can identify the organics not on the lists, Cedar must indicate the identity and the concentration of the chemical.
2. The analytical method to be used for the chlorinated pesticides is EPA method 8080.

Joe

## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

February 6, 1992

FEB 07 1992

Mr. Joe Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Dinoseb Drum Disposal Manifests

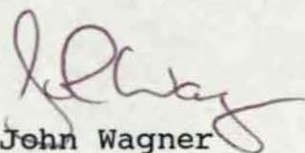
Dear Joe:

The remaining seventy-two dinoseb drums referenced in my letter of January 28, 1992, were shipped out yesterday and will arrive at ENSCO today for incineration. These drums were removed from the ground after October 18, 1991.

These are the final drums involved in this project.

The manifests are enclosed.

Sincerely,

  
John Wagner

2





STATE OF ARKANSAS  
Department of Pollution Control and Ecology  
P. O. Box 8913 Little Rock, Arkansas 72219-8913  
Telephone 501-562-7444

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-92

6  
9/30/92

| UNIFORM HAZARDOUS WASTE MANIFEST  |  | 1. Generator's US EPA ID No.<br>A R D 9 9 0 6 6 0 6 4 9 1 4 5 3 7 2 |  | Manifest Document No.  |  | 2. Page 1 of ONE                                |  | Information in the shaded areas is not required by Federal law. |  |               |  |                |  |  |  |
|---|--|---|--|--|--|---|--|---|--|---------------|--|----------------|--|--|--|
| 3. Generator's Name and Mailing Address<br>CEDAR CHEMICAL CORPORATION<br>P.O. BOX 2749-HWY 242 SOUTH<br>WEST HELENA, AR 72390   |  |   |  | A. State Manifest Document Number<br>AR- 538281  |  |   |  |   |  |               |  |                |  |  |  |
| 4. Generator's Phone ( 501-572-3701   |  |   |  | B. State Generator's ID<br>ARD990660649/99905  |  |   |  |   |  |               |  |                |  |  |  |
| 5. Transporter 1 Company Name<br>CLEAN UP TRANSPORT   |  |   |  | 6. US EPA ID Number<br>A R D 0 5 1 9 6 2 3 0 6   |  | C. State Transporter's ID<br>PC 927 H 239       |  |   |  |               |  |                |  |  |  |
| 7. Transporter 2 Company Name   |  |   |  | 8. US EPA ID Number  |  | D. Transporter's Phone 501-798-2844             |  |   |  |               |  |                |  |  |  |
| 9. Designated Facility Name and Site Address<br>ENSCO, INC.<br>AMERICAN OIL ROAD<br>EL DORADO, AR 71730   |  |   |  | 10. US EPA ID Number<br>A R D 0 6 9 7 4 8 1 9 2  |  | E. State Transporter's ID<br>PC - - - - H - - - |  |   |  |               |  |                |  |  |  |
|   |  |   |  |  |  | F. Transporter's Phone                          |  |   |  |               |  |                |  |  |  |
|   |  |   |  |  |  | G. State Facility's ID<br>30567                 |  |   |  |               |  |                |  |  |  |
|   |  |   |  |  |  | H. Facility's Phone<br>501-863-7173             |  |   |  |               |  |                |  |  |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  |  |   |  | 12. Containers<br>No. Type   |  | 13. Total Quantity                              |  | 14. Unit Wt/Vol   |  | 15. Waste No. |  |                |  |  |  |
| a. WASTE, POISONOUS SOLID, N.O.S., (DINOSEB)<br>6.1., UN 2811, PG II, RQ  |  |   |  | 5 4 D M  |  | 1 8 9 0 7                                       |  | P   |  | P020          |  |                |  |  |  |
| b.  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| c.  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| d.  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| J. Additional Descriptions for Materials Listed Above<br>RQ 10000   |  |   |  | K. Handling Codes for Wastes Listed Above<br>EMERGENCY RESPONSE INFORMATION:<br>SHIFT SUPERVISOR<br>501-572-3701 |  |   |  |   |  |               |  |                |  |  |  |
| if no alternate TSD, return to generator  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| 15. Special Handling Instructions and Additional Information<br>WMDS 198930<br>LOAD# 68791 1300/ 6 FEB BILL OF LADING# 4-5372   |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| Printed/Typed Name  |  |   |  | Signature  |  |   |  | Month Day Year  |  |               |  |                |  |  |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials   |  |   |  | Printed/Typed Name   |  |   |  | Signature   |  |               |  | Month Day Year |  |  |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials   |  |   |  | Printed/Typed Name   |  |   |  | Signature   |  |               |  | Month Day Year |  |  |  |
| 19. Discrepancy Indication Space  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |   |  |  |  |   |  |   |  |               |  |                |  |  |  |
| Printed/Typed Name  |  |   |  | Signature  |  |   |  | Month Day Year  |  |               |  |                |  |  |  |





STATE OF ARKANSAS  
Department of Pollution Control and Ecology  
P. O. Box 8913 Little Rock, Arkansas 72219-8913  
Telephone 501-562-7444

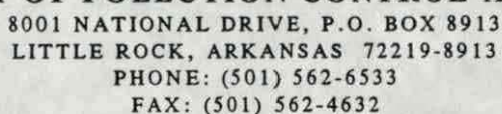
6

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-97

| UNIFORM HAZARDOUS WASTE MANIFEST  |  | 1. Generator's US EPA ID No.<br>ARD990660649/99905 | Manifest Document No.<br>of ONE  | 2. Page 1                                       | Information in the shaded areas is not required by Federal law. |  |
|---|--|--|--|---|---|--|
| 3. Generator's Name and Mailing Address<br>CEDAR CHEMICAL CORPORATION<br>P.O. BOX 2749-HWY 242 SOUTH<br>WEST HELMNA, AR 72390   |  |  | A. State Manifest Document Number<br>AR- 538283  |   |   |  |
| 4. Generator's Phone ( )  |  |  | B. State Generator's ID<br>ARD990660649/99905  |   |   |  |
| 5. Transporter 1 Company Name<br>CLEAN UP TRANSPORT   |  |  | 6. US EPA ID Number<br>ARD990660649/99905  | C. State Transporter's ID<br>PC H239 PC927      |   |  |
| 7. Transporter 2 Company Name   |  |  | 8. US EPA ID Number  | D. Transporter's Phone<br>501-798-2844          |   |  |
| 9. Designated Facility Name and Site Address<br>ENSCO, INC.<br>AMERICAN OIL ROAD<br>EL DORADO, AR 71730   |  |  | 10. US EPA ID Number   | E. State Transporter's ID<br>PC - - - - H - - - |   |  |
|   |  |  |  | F. Transporter's Phone                          |   |  |
|   |  |  |  | G. State Facility's ID<br>30567                 |   |  |
|   |  |  |  | H. Facility's Phone<br>501-863-7173             |   |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  |  |  | 12. Containers<br>No. Type   | 13. Total Quantity                              | 14. Unit Wt/Vol   |  |
| a. WASTE, POISONOUS SOLID, N.O.S., (DINOSEB)<br>6.1., UN 2811, PG II, RQ  |  |  | 18 D M   | 2350  | P   |  |
| b. WASTE, POISONOUS LIQUID, N.O.S., (DINOSEB)<br>6.1., UN 2810, PG II, RQ   |  |  | 10 D M   | 5224  | P   |  |
| c.  |  |  |  |   |   |  |
| d.  |  |  |  |   |   |  |
| J. Additional Descriptions for Materials Listed Above<br>RQ 1000  |  |  | K. Handling Codes for Wastes Listed Above<br>EMERGENCY RESPONSE INFORMATION:<br>SHIFT SUPERVISOR<br>501-572-3701 |   |   |  |
| if no alternate TSDF, return to generator   |  |  |  |   |   |  |
| 15. Special Handling Instructions and Additional Information<br>WMDS 198930<br>LOAD# 68792 1400/6 FEB   |  |  | BILL OF LADING# 4-5374   |   |   |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |  |  |   |   |  |
| Printed/Typed Name  |  |  | Signature  |   | Month Day Year  |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials   |  |  |  |   |   |  |
| Printed/Typed Name  |  |  | Signature  |   | Month Day Year  |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials   |  |  |  |   |   |  |
| Printed/Typed Name  |  |  | Signature  |   | Month Day Year  |  |
| 19. Discrepancy Indication Space  |  |  |  |   |   |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  |  |  |  |   |   |  |
| Printed/Typed Name  |  |  | Signature  |   | Month Day Year  |  |





enclosure



Cedar Chemical Corporation  
Notice of Deficiencies  
Facility Investigation Preliminary Report  
January 23, 1992

Maps

A number of maps required in the scope of work for a facility investigation at Cedar Chemical Corporation, as referenced by CAO LIS 91-118 are not included. These include:

1. General geographic location map.
2. Map showing the owners of the adjoining property.
3. Surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns and NPDES outfalls.
4. Map showing all utilities, paved areas, easements and piping.
5. Maps should show locations of SWMUs and the location of all yellow stained areas. The map should show storage, treatment and disposal facilities currently in use for solid wastes.
6. Map with location of all production wells, monitoring wells, piezometer and private water wells.
7. Locations of all previous environmental investigations.
8. Locations of spills, date and type of material.
9. Regional geologic map(s) to support the regional geologic units in Paragraph 2.3.2. Structural cross sections may be necessary to make this demonstration and should be included.
10. Map showing any past and present underground storage tanks.

Section 2.1 Site Description

1. It is stated that there are no domestic wells within one mile of the facility. Sufficient documentation is not presented to support this statement. It is recommended that documentation be provided that identifies all landowners, within a reasonable radius around the facility, who were contacted and interviewed to determine if any wells are present, being used, have potential for use or plan to install wells for any purpose. This is essential data to fully complete the investigation of ground water contamination. Contamination is known to exist in down gradient wells adjacent to the property line. This data will be the basis for notifying landowners of the potential for contamination and contacts to gain access to property for investigative and remedial purposes. If this data does not exist, it is appropriate to include this task in the workplan.



**Cedar Chemical Corporation**  
**Notice of Deficiencies**  
**Facility Investigation Preliminary Report**  
**January 23, 1992**

2.2 Site History

1. Describe solid wastes generated during the production of the finished chemicals produced at the Cedar Chemical site during the life of the plant. The description should include a list of the solid wastes generated during the production of the chemicals and any hazardous substances generated during the treatment or disposal of the solid waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of by the facility. A detailed chemical analysis should be submitted for each waste stream generated. The report should include a list of all raw materials used, intermediate products, and finished products used or produced during the life of the plant.
2. The description of the ponds used to dispose of waste during the time period 1971 to 1973 should contain a description of the waste disposed of in the ponds. The description should contain a list of the chemical constituents disposed of in the ponds.

Section 2.2.2 Solid and Hazardous Waste

1. Provide a discussion of past RCRA activities and RCRA wastes managed at the facility.
2. In Table 2.1, include hazardous waste codes, volume and process that generates all hazardous wastes.

Sections 3.1.2 Surface Water

1. Provide greater detail on the investigation and the findings of the investigation on the biological treatment system which were done under the previous CAO. The analysis of the sludge from all of the impoundments including the location and depth of the samples must be included for reference to evaluate the release potential of these units.

Section 3.1.3 Soil Pathway

1. Provide reference to samples taken from the Biological treatment system under previous CAO. Information is relevant to soil contamination.

Section 3.1.4 Ground Water Pathway

1. Upper low permeability zones would tend to retard vertical migration of contaminants; however, it is noted that well cluster (MW6, MW6A, MW6B, MW6C) indicate highest concentrations in the upper (B and C) zones. The

**Cedar Chemical Corporation  
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January 23, 1992**

potential for ground water contamination is apparent and is known to exist. Sufficient data has not been collected to characterize all zones of contamination at the site.

Section 3.2 Possible Sources of Contamination

1. Indicate status of all SWMUs identified in RFA performed in January, 1988 by A. T. Kearney, Inc. and The Earth Technology Corporation for the U. S. Environmental Protection Agency.
2. Provide the approximate date the drums in the drum vault were placed in the drum vault.

Appendix A

1. Include construction documentation for monitoring wells and designate correct well numbers.

Appendix B

1. Include discharges that led to previous CAO including volume of wastes.



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Facility Investigation Workplan  
January 23, 1992**

Preface

1. The primary purpose of the FIWP is to determine if hazardous constituents have been released from SWMUs as stated; however, it is necessary to evaluate the nature and extent of all contaminants released from these units including "non-hazardous" constituents such as sulfates and nitrates.

Section 1.2.2

1. The initial samples collected at the facility are proposed to be analyzed for volatile organic compounds, semi-volatile organic compounds, chlorinated pesticides and chlorinated herbicides. It is necessary to expand the parameter list to include primary drinking water standards (Appendix III), secondary drinking water standards and other constituents representative of facility waste streams. At a minimum, the following constituents must be added to the proposed parameters: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, chloride, fluoride, nitrate, sulfate, ammonia, sodium and cyanide. These additional parameters are necessary in the ground water monitoring program to evaluate background conditions in order to fully evaluate the facility's impact on ground water quality.

Section 1.2.6

1. Elaborate on head space analysis technique and criteria for additional organic analysis of soil samples.
2. Soil boring cores should be split in two, photographed, and visually logged. Samples should also be obtained for physical properties analysis (grain size and Atterburg limits). Samples for physical properties should be obtained at least at every change in lithology and soils with more than 50% passing a No. 200 sieve need Atterburg limits testing. Coarser soils (less than 50% passing a No. 200 sieve) need grain size analysis and Atterburg limits utilizing dual classification in the Unified Soil Classification System except when the sample contains less than 5% passing the number 200 sieve. Continuous cores are recommended in this boring program to assure an adequate number of samples can be obtained. Include provisions for handling, storage, analysis, and disposal of cuttings.
3. Include provisions to allow an adequate amount of time to establish ground water level before installing well. ADPC&E recommends that the boreholes be left open for 24 hours before well installation to evaluate perched water conditions. The same protocols stated in comments to Section 1.2.6.2 should be utilized for sampling these boreholes.



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January 23, 1992

4. Include provisions for containing, analysis, storage and disposal of water purged from the wells.
5. The non-aqueous phase liquid testing shall be done independent of photoionization detector (PID) readings.
6. Include provisions to establish proper flow rate for sampling when bladder pumps are used.

Section 1.3.1

1. In this section, the facility has proposed a ground water monitoring plan. The facility apparently does not understand the purpose of this section of the work plan. This section would more appropriately be titled Ground Water Quality Assessment Plan and should be capable of doing just that. This plan must go beyond installation of additional wells and sampling for one year. It should establish criteria when additional work is required with a logical approach of determining the nature of contamination, horizontal and vertical extent of contamination, and develop a sufficient data base to enter into a corrective action plan if necessary. The additional parameters listed in comment on Section 1.2.2 are necessary in this ground water monitoring program.

Section 1.3.2

1. Submit any data that shows air releases are not a significant contaminant pathway for the wastewater treatment area (SWMU 63, 64, 65, 68). If no data is available, the work plan must contain a plan for air monitoring around the wastewater treatment area.
2. The workplan must include a sample of the sludge in the active wastewater treatment facility. The workplan should include a complete TC scan.
3. In a citizens complaint investigation, No. 78C0118, the complaint report indicated a rupture of a sewer line for process wastewater. The workplan must investigate the soils in area of the release. The workplan must also detail how any underground sewer lines will be investigated for possible releases.
4. During the site visit of December 11, 1991, a soil stain from a spill of the organic layer from the API separator was observed going into a ditch. The workplan must include soil samples from the area stained by spills and from the ditch where the spill entered the stream.



**Cedar Chemical Corporation  
Notice of Deficiencies  
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January 23, 1992**

5. During the site visit of December 11, 1991, Cedar personnel stated the tank located near the compressor house in the wastewater treatment area was used to hold process waste from the propanil process. It was also noted that the tank leaked. The workplan must include soil sampling around the tank.

Section 1.3.3

1. Submit any data that shows air releases are not a significant contaminant pathway for the closed surface impoundments (SWMU 69, 70, 71). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.
2. The workplan should contain a plan to monitor the surface water runoff from the closed surface impoundments, area of concern number one, and the railroad loading area.
3. The work plan must include soil samples of the soils in the closed impoundments. A grid system with a random sampling method must be proposed to survey the condition of the soils. Soil borings must be included in the investigation of the closed impoundments.

Section 1.3.4

1. Submit any data that shows air releases are not a significant contaminant pathway for the storm water system (SWMU 59, 60). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.
2. During the site visit of December 11, 1991, Cedar personnel stated the storm water pond had been dredged on at least two occasions. The dredge material from the ponds was used as fill for the area around the storm water ponds. The workplan must include soil borings of the soils around the storm water pond. The workplan must include provisions to analyze the soils from the borings for chemicals used or produced during the life of the plant.
3. Cedar must investigate sediments in the receiving stream for NPDES outfall 001. The workplan must include a sampling plan for the investigation of the sediments in the receiving stream.

Section 1.3.6

1. The design of the drum vault located in the foundation of maintenance services warehouse is unknown; therefore, its ability to contain a release is unknown. ADPC&E recommends that the plan include a provisions to sample soils within the vault by drilling hole(s) through



**Cedar Chemical Corporation  
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January 23, 1992**

the foundation. There remains a possibility that these drums may contain liquid and the vault was not designed so that liquids could be removed. If wastes are to be left in place this unit must have a plan for long term monitoring because the existing monitoring wells are not adequately located for the immediate detection of a release into the ground water.

2. Cedar must make a grid system in areas where yellow staining is not evident. A sample should be taken randomly from each of the grids. The samples shall not be composited. The soil samples should be analyzed for volatile and semi-volatile organics, pesticides, and heavy metals. If a detectable concentration of any of the TC constituents listed in 40 CFR 261.24 is found above normal background level, Cedar must perform a TC analysis for that constituent.
3. Provide a map showing all areas with visible soil staining. All areas with visible yellow staining must be sampled.
4. It was reported in the Ecology and Environment memo (July 29, 1986) that the yellow stained areas contained buried drums and this possibility must be investigated. Cedar must present a method in the workplan to determine if buried drums exist in the yellow stained areas.

SWMUs not in Workplan

1. The workplan should include a strategy to investigate the condition of the concrete sumps and drainage channels in the current production areas. The workplan should include a requirement for a certification from an independent registered engineer of the condition of the concrete sumps and ditches.
2. The facility should investigate the drum crushing area, SWMU 47.
3. Cedar should investigate the waste oil drum, SWMU 51.
4. Cedar must investigate soils in the lowland area on the south west side of the wastewater treatment area.

Section 1.4.1.2

1. The Waste Analysis Plan for soils should be expanded to include analysis for cyanide and heavy metals.
2. The Waste Analysis Plan must include a procedure to obtain a background soil sample. The background soil sample shall be analyzed for heavy metals.



**Cedar Chemical Corporation  
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January 23, 1992**

3. The work plan must provide a mechanism for written notification of ADPC&E at least five days prior to a sampling event to provide ADPC&E an opportunity to obtain split samples.

Section 1.4.7

1. The analytical section of the workplan must indicate that Cedar will report any concentrations of organics not listed on the target chemical list indicated during the analysis of any soil, water or air samples analyzed during the RFI. If Cedar can identify the organics not on the lists, Cedar must indicate the identity and the concentration of the chemical.
2. The analytical method to be used for the chlorinated pesticides is EPA method 8080.



P 532 759 512

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED

NOT FOR INTERNATIONAL MAIL

(See Reverse)

CEDAR CHEMICAL CORPORATION  
P. O. BOX 2648  
WEST HELENA, AR 72390

ZIP Code

Postage Fee

Delivery Fee

Postage showing  
date Delivered

Postage showing to whom,  
address of Delivery

Postage and Fees

\$ 29  
100

100

\$ 29





**STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE,  
CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)**

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier. (no extra charge)
2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.
3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.
4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.
5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.
6. Save this receipt and present it if you make inquiry.

United States Postal Service

Official Business

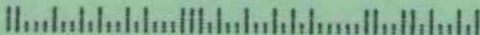


PENALTY FOR PRIVATE  
USE, \$300

Print your name, address and ZIP Code here



ARKANSAS DEPARTMENT OF  
POLLUTION CONTROL & ECOLOGY  
8001 NATIONAL DRIVE  
P.O. BOX 8913  
LITTLE ROCK, AR 72219-8913





**SENDER:**

- Complete items 1 and 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or back if space does not permit.
- Write "Return Receipt Requested" on the article number.

3. Article Addressed to

CEDAR CHEMICAL CORPORATION  
P. O. BOX 2648  
WEST HELENA, AR 72390

I also want to receive the following services (for an extra fee):

1. ☐ Addressee's Address2. ☐ Restricted Delivery

Consult postmaster for fee.

Article Number

P532 759 512

Service Type

☐ Registered☐ Insured☒ Certified☐ COD☐ Express Mail☐ Return Receipt for Merchandise

7. Date of Delivery

1-31-92

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



CERTIFIED MAIL P532 759 512

January 29, 1992

ARD990660649  
Cedar Chemical Corporation  
P. O. Box 2648  
West Helena, AR 72390

RE: Past Due Fees

Dear Sir:

On November 25, 1991, an invoice for your 1992 Monitoring/Inspection Fee was mailed to you. This fee was due December 31, 1991. As of this date, no response has been received. According to ADPC&E Regulation No. 23 (Hazardous Waste Management) Section 11 t, a 10% late fee is added to the copy of the invoice I have attached. The total fee now due is \$550.00. This fee must be paid within ten (10) days of receipt of this letter.

Failure to pay the referenced fee is considered an unlawful act and as such, may be subject to formal enforcement action (including assessment of civil penalties) pursuant to the Hazardous Waste Management Act.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Joseph M. Hoover  
Manager, Enforcement Branch  
Hazardous Waste Division

JMH/ckh:pdfiltr37

cc: Mike Bates, Chief, Hazardous Waste Division

# 54-0068  
CSN.....  
PERMIT NO 0.....  
HAZARDOUS WASTE-SORT:  
PERMIT/COMPLIANCE/SUPERFUNDS



4

SN: 54-0068 PERMIT NO. ....  
ALLIANCE  
SD: PERMIT, COMPLIANCE  
FEES

To: Chuck Bennett, Chief, Water Division

Through: Mike Bates *MB*  
Jerry Williams, Technical Division *jr*

From: Phillip Murphy

Date: January 24, 1992

Regarding: Cedar Chemical

During a site visit to Cedar Chemical in West Helena, David Hartley and I observed evidence of illegal water discharges from the oil and water separator. A large stain of black organics emanated from the oil and water separator and entered into a stream that flowed by the facility. Cedar Chemical is a manufacturer of pesticides. It was apparent the organic phase from the oil and water separator had overflowed on several occasions. A representative of Cedar indicated it was a routine occurrence.

The storm water detention pond at Cedar was heavily silted. The pond did not have more than a foot of freeboard to store storm water. The NPDES permit requires Cedar to contain the first 150,000 gallons of a rainfall event. In my opinion, Cedar cannot contain the storm water required by the NPDES permit. Cedar is conducting a TRE for acute toxicity in the storm water discharge.



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



February 23, 1993

54-0068  
CSN.....  
PERMIT NO. ....  
HAZARDOUS WASTE - SORT:  
PERMIT/COMPLIANCE/SUPERFUND

Mr. John Wagner  
Environmental Engineer  
Cedar Chemical Corporation  
P. O. Box 2749  
West Helena, AR 72390

Dear Mr. Wagner:

This is to confirm that the Department received your subsequent notification of hazardous waste activity form and it has been processed.

If you have any questions, please call me at (501) 570-2876.

Sincerely,

Cindy Harmon  
Administrative Assistant II  
Programs Branch  
Hazardous Waste Division

ckh/ACKLTR65

cc: Vicky Prewett, Program Coordinator  
Files



FEB 17 1993

Contact location change, waste code change

See related to the instructions  
Filing Notification before  
completing this form. The  
information requested here is  
required by law (Section 3010  
of the Resource Conservation  
and Recovery Act).

EPA

Notification of  
Regulated WasteDate Received  
(For Official Use Only)

FEB 17 1993

204

I. Installation's EPA ID Number (Mandatory)

II. Facility's EPA ID Number

III. Installation's EPA ID Number

ARD990660649

IV. Name of Installation (Include Company and Specific Site Name)

CEDAR CHEMICAL CORPORATION

V. Location of Installation (Physical address not P.O. Box or Route Number)

Street  
HIGHWAY 242 SOUTH

Street (continued)

City or Town

WEST HELENA

State

ZIP Code

AR 72390-

County Code

County Name

PHILLIPS

VI. Installation Mailing Address (See Instructions)

Street or P.O. Box

PO BOX 2749

City or Town

WEST HELENA

State

ZIP Code

AR 72390-

VII. Installation Contact (Person to be contacted regarding waste activities at site)

Name (last)

WAGNER

(first)

JOHN

Job Title

ENVIR. ENGR.

Phone Number (area code and number)

501-572-3701

VIII. Installation Contact Address (See Instructions)

A. Contact Address

B. Street or P.O. Box

X

City or Town

State

ZIP Code

IX. Ownership (See Instructions)

A. Name of Installation's Legal Owner

CEDAR CHEMICAL

Street, P.O. Box, or Route Number

5100 POPLAR AVE., SUITE 2414

City or Town

MEMPHIS

State

ZIP Code

TN 38137-

Phone Number (area code and number)

901-685-5348

B. Land type

C. Owner type

D. Other type

Date Changed

Month Day Year

P

P

X

FEB 17 1993 -P



For Official Use Only

**VIII. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. Refer to instructions.)**

| Hazardous Waste Activity  |  | Used Oil Facilities   |
|---|--|---|
| <input checked="" type="checkbox"/> 1. Generation (See instructions)<br><input type="checkbox"/> a. Greater than 1000 kg/mo (2,200 lbs.)<br><input type="checkbox"/> b. 100 - 1000 kg/mo (220 - 2,200 lbs.)<br><input type="checkbox"/> c. Less than 100 kg/mo (220 lbs.)<br><input type="checkbox"/> 2. Transport (Indicate Mode in boxes 1-5 below)<br><input type="checkbox"/> a. For over waste only<br><input type="checkbox"/> b. For commercial purposes<br><input type="checkbox"/> Mode of Transportation:<br><input type="checkbox"/> 1. Air<br><input type="checkbox"/> 2. Rail<br><input type="checkbox"/> 3. Highway<br><input type="checkbox"/> 4. Water<br><input type="checkbox"/> 5. Other (Specify) | <input type="checkbox"/> Greater Storage, Processing, or Installation<br><input type="checkbox"/> Note: A permit is required for this activity.<br><input type="checkbox"/> Hazardous Waste Incineration<br><input type="checkbox"/> a. General Purpose Incinerator<br><input type="checkbox"/> b. Oil Burners<br><input type="checkbox"/> 1. Burner (Indicate device)<br><input type="checkbox"/> 2. Industrial Boiler<br><input type="checkbox"/> 3. Industrial Furnace<br><input type="checkbox"/> 4. Underground Injection Control | <input type="checkbox"/> 1. Oil Specification Used Oil Fuel<br><input type="checkbox"/> a. Generator Marketing to Burner<br><input type="checkbox"/> b. Other Marketer<br><input type="checkbox"/> c. Burner (Indicate device)<br><input type="checkbox"/> Type of Combustion Device:<br><input type="checkbox"/> 1. Utility Boiler<br><input type="checkbox"/> 2. Industrial Boiler<br><input type="checkbox"/> 3. Industrial Furnace<br><input type="checkbox"/> 2. Specification Used Oil Fuel Marketer (or on-site burner) who first claims the Oil Meets the Specification |

**IX. Description of Regulated Wastes (Use additional sheets if necessary)**

**A. Characteristics of Nonlisted Hazardous Wastes.** Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. (See 40 CFR Parts 261.20 - 261.24)

| 1. Ignitable (D001)                 | 2. Corrosive (D002)                 | 3. Reactive (D003)       | 4. ER-Toxic (D000)       | 5. Use of CERCLA hazardous waste number(s) for the ER-Toxic contaminant(s) |
|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

**B. Listed Hazardous Wastes.** (See 40 CFR 261.31 - 33. See instructions if you need to list more than 12 waste codes.)

| 1    | 2    | 3    | 4    | 5    | 6    |
|------|------|------|------|------|------|
| F005 | U154 | P020 | U070 | U220 | U170 |
| 7    | 8    | 9    | 10   | 11   | 12   |
| U239 | U247 |      |      |      |      |

**C. Other Wastes.** (State or other wastes requiring an I.D. number. See instructions.)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
|   |   |   |   |   |   |

**X. Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

| Signature       | Name and Official Title (type or print) | Date Signed |
|-----------------|---|-------------|
| David V. Hoppel | David Hoppel / Plant Mgr                | 2/11/93     |

**XI. Comments**

THE FOLLOWING WASTE CODES ARE ASSOCIATED WITH OUR TIME EVENTS - P020, U070, U220, U170, U239 & U247

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section III of the booklet for addresses.)



ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

TO : Joe Hoover, Enforcement Branch Administrator, HWD  
THROUGH : Jim Rigg, Ground Water Branch Supervisor, HWD JR.  
FROM : David Hartley, Ground Water Branch Geologist, HWD DH  
DATE : January 21, 1992  
SUBJECT : CEDAR CHEMICAL CORPORATION CAO LIS 91-118  
REVIEW OF FACILITY INVESTIGATION PRELIMINARY REPORT AND  
FACILITY INVESTIGATION WORK PLAN SUBMITTED OCTOBER 1990

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I have reviewed the referenced documents and found the following deficiencies and provide comments.

**Facility Investigation Preliminary Report**

- Page 4 - Section 2.1 It is stated that there are no domestic wells within one mile of the facility. Sufficient documentation is not presented to support this statement. It is recommended that documentation be provided that identifies all landowners, within a reasonable radius around the facility, who were contacted and interviewed to determine if any wells are present, being used, have potential for use or plan to install wells for any purpose. This is essential data, to fully complete the investigation of ground water contamination. Contamination is known to exist in down gradient wells adjacent to their property line. This data will be the basis for notifying landowners of the potential for contamination and contacts to gain access to property for investigative and remedial purposes. If this data does not exist, it is appropriate to include this task in the work plan.
- Page 7 - Section 2.2.2 Provide a discussion of past RCRA activities and RCRA wastes managed at the facility.
- Page 8 - Includes waste code, volume and process that generated all wastes.
- Page 13 - Section 2.4 Include all reference to RCRA Interim Status operations at the facility and reference to withdrawal of interim status of all units that were regulated including dates of approval.



- Page 15 - Section 3.1.2 Provide greater detail on the investigation and findings on the biological treatment system which were done under the previous CAO. The analysis of the sludge from all of the impoundments including the location and depth of the samples must be included for reference to evaluate the release potential of these units.
- Page 16 - Section 3.1.3 Provide reference to samples taken from the Biological treatment system under previous CAO. Information is relevant to soil contamination.
- Page 16 - Section 3.1.4 Comment: Upper low permeability zones would tend to retard vertical migration of contaminants, however, it is noted that well cluster (MW6, MW6A, MW6B, MW6C) indicate highest concentrations in the upper (B and C) zones. The potential for ground water contamination is apparent and is known to exist. Sufficient data has not been collected to characterize all zones of contamination at the site.
- Page 18 - Section 3.2 Include status of all SWMU's identified in RFA and justification for RFI.
- Page 22 - Section 3.2.9 Provide the approximate data these drums were disposed of or the date the warehouse was constructed.

A number of maps required in the scope of work for a facility investigation at Cedar Chemical Corporation, as referenced by CAO LIS 91-118 are not included. These include:

1. General geographic location map.
2. Ownership map.
3. Surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns and NPDES outfalls.
4. Map showing all utilities, paved areas, easements and piping.
5. Map of all past and present SWMUs.
6. Map with location of all production wells, monitoring wells, piezometer and private water wells.
7. Locations of all previous environmental investigations.
8. Locations of spill, date and type of material.
9. Regional geologic map(s) to support the regional geologic units in Paragraph 2.3.2. Structural cross sections may be necessary to make this demonstration and should be included.



Appendix A - Include construction documentation for monitoring wells and designate correct well numbers.

Appendix B - Include discharges that led to previous CAO including volume of wastes.

It would be appropriate to include an appendix that summarized the closures and investigations that were done under the previous CAO. This could form the basis of investigating or not investigating SWMUs identified in the RFA.

#### **FACILITY INVESTIGATION WORK PLAN (FIWP)**

The deficiencies noted in the preliminary report will obviously impact this work plan. This review is preliminary and may change this plan as the deficiencies noted in the preliminary report are addressed. I recommend that a site visit be done before final comments are drafted in response to this work plan.

Preface      The primary purpose of the FIWP is to determine if hazardous constituents have been released from SWMUs as stated, however, it is necessary to evaluate the nature and extent of all contaminants released from these units including "non-hazardous" constituents such as sulfates and nitrates.

Page 4 -      Section 1.2.2    The initial samples collected at the facility are proposed to be analyzed for volatile organic compounds, semi-volatile organic compounds, chlorinated pesticides and chlorinated herbicides. It is necessary to expand the parameter list to include primary drinking water standards (Appendix III), secondary drinking water standards and other constituents representative of facility waste streams. At a minimum I recommend adding the following constituents to the proposed parameters: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, chloride, fluoride, nitrate, sulfate, ammonia, sodium and cyanide. These additional parameters are necessary in the ground water monitoring program to evaluate background conditions in order fully evaluate the facility's impact on ground water quality.

Page 6 -      Section 1.2.6.1    Elaborate on head space analysis technique and criteria for additional organic analysis of soil samples.

Page 7 -      Section 1.2.6.2    Soil boring cores should be split in two, photographed, and visually logged. Samples should also be obtained for physical properties analysis (grain size and Atterburg limits). Samples for physical properties should be obtained at least at every change in lithology and soils with more than 50% passing a No. 200 sieve need Atterburg limits testing. Coarser soils (less than 50% passing a No. 200 sieve) need grain size analysis and Atterburg limits utilizing dual classification in the unified soil classification system except when the sample contains less than 5% passing the number 200 sieve. Continuous cores are recommended in this boring program to assure an adequate number of samples can be obtained. Include provisions for handling, storage, analysis, and disposal of cuttings.



- Page 7 - Section 1.2.6.3 Include provisions to allow an adequate amount of time to establish ground water level before installing well. I recommend that the boreholes be left open for 24 hours before well installation to evaluate perched water conditions. The same protocols stated in my comments to Section 1.2.6.2 should be utilized for sampling these boreholes.
- Page 12 - Section 1.2.6.4 Include provisions for containing, analysis, storage and disposal of water purged from the wells.
- Page 13 - Section 1.2.6.4. The non-aqueous phase liquid testing shall be done independent of photoionization detector (PID) readings.
- Page 14 - Section 1.2.6.5 Include provisions to establish proper flow rate for sampling when bladder pumps are used.
- Page 15 - Section 1.3.1 In this section, the facility has proposed a ground water monitoring plan. The facility apparently does not understand the purpose of this section of the work plan. This section would more appropriately be titled Ground Water Quality Assessment Plan and should be capable of doing just that. This plan must go beyond installation of additional wells and sampling for one year. It should establish criteria when additional work is required with a logical approach of determining the nature of contamination, horizontal and vertical extent of contamination, and develop a sufficient data base to enter into a corrective action plan if necessary. The additional parameters listed in my comment to Section 1.2.2 are necessary in this ground water monitoring program.
- Page 15 - Section 1.3.2 Include provisions to sample sediment (sludge) in the impoundment.
- Page 17 - Section 1.3.3 Include a plan to sample soils within these closed impoundments and to investigate extent of soil contamination.
- Page 19 - Section 1.3.4 Sample sediment within the stormwater pond and outfall 001 (industrial park ditch).
- Page 23 - Section 1.3.6 The design of the drum vault located in the foundation of maintenance services warehouse is unknown therefore its ability to contain a release is unknown. I recommend that the plan include a provisions to sample soils within the vault by drilling hole(s) through the foundation. There remains a possibility that these drums may contain liquid and the vault was not designed so that liquids could be removed. If wastes are to be left in place this unit must have a plan for long term monitoring because the existing monitoring wells are not adequately located for the immediate detection of a release into the ground water.



Joe Hoover  
January 21, 1992  
Page 5

Page 25 - Site #6 Provide a map showing all areas with visible soil staining. Continuous cores should be taken during this boring program. Coring should be done to the top of the water table. The facility should present the rational for physical properties analysis of the soil cores. It was reported in the Ecology and Environment memo (July 29, 1986) that the yellow stained areas contained buried drums and this possibility must be investigated.

Other Areas I have reviewed our files and aerial photographs and have determined that there is a high potential of other drum burial areas and other storage areas that require further investigation. Perhaps a meeting with the facility in the near future would be appropriate to present these findings. I plan to make a site visit in the near future which may also add other areas of concern.

The facility should be advised to follow the outlines attached to the CAO and the RFA to avoid future deficiencies. A detailed air-photo analysis could be utilized to direct the facility investigation to specific areas of past storage and disposal areas.

*Handwritten:* 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 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3833, 3834, 3835, 3836, 3837, 3838, 3839, 3840, 3841, 3842, 3843, 3844, 3845, 3846, 3847, 3848, 3849, 3850, 3851, 3852, 3853, 3854, 3855, 3856, 3857, 3858, 3859, 3860, 3861, 3862, 3863, 3864, 3865, 3866, 3867, 3868, 3869, 3870, 3871, 3872, 3873, 3874, 3875, 3876, 3877, 3878, 3879, 3880, 3881, 3882, 3883, 3884, 3885, 3886, 3887, 3888, 3889, 3890, 3891, 3892, 3893, 3894, 3895, 3896, 3897, 3898, 3899, 3900, 3901, 3902, 3903, 3904, 3905, 3906, 3907, 3908, 3909, 3910, 3911, 3912, 3913, 3914, 3915, 3916, 3917, 3918, 3919, 3920, 3921, 3922, 3923, 3924, 3925, 3926, 3927, 3928, 3929, 3930, 3931, 3932, 3933, 3934, 3935, 3936, 3937, 3938, 3939, 3940, 3941, 3942, 3943, 3944, 3945, 3946, 3947, 3948, 3949, 3950, 3951, 3952, 3953, 3954, 3955, 3956, 3957, 3958, 3959, 3960, 3961, 3962, 3963, 3964, 3965, 3966, 3967, 3968, 3969, 3970, 3971, 3972, 3973, 3974, 3975, 3976, 3977, 3978, 3979, 3980, 3981, 3982, 3983, 3984, 3985, 3986, 3987, 3988, 3989, 3990, 3991, 3992, 3993, 3994, 3995, 3996, 3997, 3998, 3999, 4000, 4001, 4002, 4003, 4004, 4005, 4006, 4007, 4008, 4009, 4010, 4011, 4012, 40

344  
JAN 30 1992  
**CEDAR CHEMICAL CORPORATION**

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

January 28, 1992

Mr. Joe Hoover  
Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Dinoseb Drum Disposal, Manifests

Dear Joe:

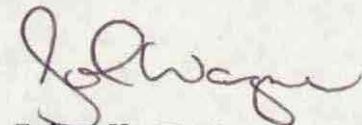
As directed by Randall Mathis' letter of December 11, 1991, I am enclosing two manifests for dinoseb waste drums sent to ENSCO for incineration on January 28.

One hundred and eight drums were sent out. These drums were removed from the ground between October 3 and October 18, 1991.

The remaining drums will be sent to ENSCO on February 6. These drums were removed between October 19 and the end of the project. With our 30-day extension we are still within the mandated deadline.

I will send the remaining manifests next week.

Sincerely,



John Wagner





STATE OF ARKANSAS  
Department of Pollution Control and Ecology  
P. O. Box 8913 Little Rock, Arkansas 72219-8913  
Telephone 501-562-7444

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 12/31/92

| UNIFORM HAZARDOUS WASTE MANIFEST  |  | 1. Generator's US EPA ID No.<br>A R D 9 9 0 6 6 0 6 4 9 4 5 3 1 8   | Manifest Document No.<br>D 4 1 6 | 2. Page 1<br>of ONE               | Information in the shaded areas is not required by Federal law. |  |
|---|--|---|----------------------------------|-----------------------------------|---|--|
| 3. Generator's Name and Mailing Address<br><b>CEDAR CHEMICAL CORPORATION<br/>P.O. BOX 2749 HWY 242 SOUTH<br/>WEST HELENA, AR 72390</b>  |  | A. State Manifest Document Number<br><b>AR- 538277</b>  |                                  |                                   | B. State Generator's ID<br><b>ARD990660649/09905</b>            |  |
| 4. Generator's Phone ( 501-572-3701   |  | 6. US EPA ID Number<br>A R D 0 5 1 9 6 2 3 0 6  |                                  |                                   | C. State Transporter's ID<br>PC H239 PC927                      |  |
| 5. Transporter 1 Company Name<br><b>CLEAN UP TRANSPORT</b>  |  | 8. US EPA ID Number   |                                  |                                   | D. Transporter's Phone<br><b>501-798-2844</b>                   |  |
| 7. Transporter 2 Company Name   |  | 10. US EPA ID Number  |                                  |                                   | E. State Transporter's ID<br>PC H                               |  |
| 9. Designated Facility Name and Site Address<br><b>ENSCO, INC.<br/>AMERICAN OIL ROAD<br/>EL DORADO, AR 71730</b>  |  | 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)                                      |                                  |                                   | F. State Facility's ID<br><b>30567</b>                          |  |
|   |  | 12. Containers  |                                  |                                   | H. Facility's Phone<br><b>501-863-7173</b>                      |  |
|   |  | No. Type  |                                  |                                   | 13. Total Quantity  |  |
| a. <b>WASTE, POISONOUS LIQUID, N.O.S., (DINOSEB)<br/>6.1., UN 2810, PG II, RQ</b>   |  | 3 D M   |                                  |                                   | 1 P 6 8 P P020  |  |
| b. <b>WASTE, POISONOUS SOLID, N.O.S., (DINOSEB)<br/>6.1., UN 2811, PG II, RQ</b>  |  | 51 D M  |                                  |                                   | 1 6 1 9 0 P P020  |  |
| c.  |  |   |                                  |                                   |   |  |
| d.  |  |   |                                  |                                   |   |  |
| J. Additional Descriptions for Materials Listed Above<br><b>RQ 1000</b>   |  | K. Handling Codes for Wastes Listed Above<br><b>EMERGENCY RESPONSE INFORMATION:<br/>SHIFT SUPERVISOR<br/>501-572-3701</b> |                                  |                                   |   |  |
| if no alternate TSDF, return to generator   |  |   |                                  |                                   |   |  |
| 15. Special Handling Instructions and Additional Information<br><b>WMDS 198930<br/>LOAD 68781 1630/28 JAN BILL OF LADING 4-5318 SEAL 500217</b>   |  |   |                                  |                                   |   |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |   |                                  |                                   |   |  |
| Printed/Typed Name<br><b>JOEL WALKER</b>  |  | Signature<br><i>Joel Walker</i>   |                                  | Month Day Year<br><b>01 28 92</b> |   |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials<br>Printed/Typed Name<br><b>JOHN DUNWIDIE</b>   |  | Signature<br><i>John Dunwidge</i>   |                                  | Month Day Year<br><b>01 28 92</b> |   |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials<br>Printed/Typed Name   |  | Signature   |                                  | Month Day Year                    |   |  |
| 19. Discrepancy Indication Space  |  |   |                                  |                                   |   |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.<br>Printed/Typed Name  |  | Signature   |                                  | Month Day Year                    |   |  |





STATE OF ARKANSAS  
Department of Pollution Control and Ecology  
P. O. Box 8913 Little Rock, Arkansas 72219-8913  
Telephone 501-562-7444

6  
9/30/92

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 6/30/91

| UNIFORM HAZARDOUS WASTE MANIFEST  |  | 1. Generator's US EPA ID No.<br>A R D 9 9 0 6 6 0 6 4 9 4 3 3 2 3 |  | Manifest Document No.   |  | 2. Page 1 of ONE                                 |  | Information in the shaded areas is not required by Federal law. |  |
|---|--|---|--|---|--|--|--|---|--|
| 3. Generator's Name and Mailing Address<br><b>CEDAR CHEMICAL CORPORATION<br/>P.O. BOX 2749-HWY 242 SOUTH<br/>WEST HELENA, AR 22390</b>  |  |   |  | A. State Manifest Document Number<br><b>AR- 538279</b>  |  |  |  |   |  |
| 4. Generator's Phone ( <b>501-572-3701</b> )  |  |   |  | B. State Generator's ID<br><b>ARD990660649</b>  |  |  |  |   |  |
| 5. Transporter 1 Company Name<br><b>CLEAN UP TRANSPORT</b>  |  |   |  | 6. US EPA ID Number<br>A R D 0 5 1 9 6 2 3 0 6  |  | C. State Transporter's ID<br><b>PC 927 H 239</b> |  |   |  |
| 7. Transporter 2 Company Name   |  |   |  | 8. US EPA ID Number   |  | D. Transporter's Phone<br><b>501-798-2844</b>    |  |   |  |
| 9. Designated Facility Name and Site Address<br><b>ENSCO, INC.<br/>AMERICAN OIL ROAD<br/>EL DORADO, AR 71730</b>  |  |   |  | 10. US EPA ID Number<br>A R D 0 6 9 7 4 8 1 9 2   |  | E. State Transporter's ID<br><b>PC H</b>         |  | F. Transporter's Phone  |  |
|   |  |   |  |   |  | G. State Facility's ID<br><b>30567</b>           |  |   |  |
|   |  |   |  |   |  | H. Facility's Phone<br><b>501-863-7173</b>       |  |   |  |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  |  |   |  | 12. Containers<br>No. Type  |  | 13. Total Quantity                               |  | 14. Unit<br>Wt/Vol  |  |
| a. <b>WASTE, POISONOUS LIQUID, N.O.S., (DINOSEB)<br/>6.1., UN 2810, PG III RQ</b>   |  |   |  | <b>5</b> D M  |  | <b>944</b>                                       |  | <b>P</b>  |  |
| b. <b>WASTE, POISONOUS SOLID, N.O.S., (DINOSEB)<br/>6.1., UN 2811, PG II, RQ</b>  |  |   |  | <b>49</b> D M   |  | <b>7491</b>                                      |  | <b>P</b>  |  |
| c.  |  |   |  |   |  |  |  |   |  |
| d.  |  |   |  |   |  |  |  |   |  |
| J. Additional Descriptions for Materials Listed Above<br><b>RQ 1000</b>   |  |   |  | K. Handling Codes for Wastes Listed Above<br><b>EMERGENCY RESPONSE INFORMATION:<br/>SHIFT SUPERVISOR<br/>501-572-3701</b> |  |  |  |   |  |
| if no alternate TSDf, return to generator   |  |   |  |   |  |  |  |   |  |
| 15. Special Handling Instructions and Additional Information<br><b>WMDS 198930<br/>LOAD 68782 1730/28 JAN BOLL OF LADING# 4-5323</b>  |  |   |  | <b>561-# 00221</b>  |  |  |  |   |  |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations.<br>If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. |  |   |  |   |  |  |  |   |  |
| Printed/Typed Name<br><i>L. H. H. H. H. H.</i>  |  |   |  | Signature<br><i>L. H. H. H. H. H.</i>   |  | Month Day Year<br><i>01 28 92</i>                |  |   |  |
| 17. Transporter 1 Acknowledgement of Receipt of Materials<br>Printed/Typed Name<br><i>KON NARRINGTON</i>  |  |   |  | Signature<br><i>KON NARRINGTON</i>  |  | Month Day Year<br><i>01 28 92</i>                |  |   |  |
| 18. Transporter 2 Acknowledgement of Receipt of Materials<br>Printed/Typed Name   |  |   |  | Signature   |  | Month Day Year                                   |  |   |  |
| 19. Discrepancy Indication Space  |  |   |  |   |  |  |  |   |  |
| 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.<br>Printed/Typed Name  |  |   |  | Signature   |  | Month Day Year                                   |  |   |  |



ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

54-008  
CSN: 54-008  
PERMIT NO. 54-008  
HAZARDOUS  
SOME PERMIT, SOME NOT  
FEES

MEMORANDUM

TO : Joe Hoover, Enforcement Branch Administrator, HWD  
FROM : David Hartley, Geologist, Ground Water Branch, HWD DH  
DATE : January 21, 1992  
SUBJECT : RECORD OF SITE VISIT ON 12-11-91 FOR THE PROPOSED  
FACILITY INVESTIGATION WORK PLAN, CEDAR CHEMICAL  
CORPORATION

=====

Phil Murphy and I went to the facility and met with John Wagner to make observations in relation to the work plans. My observations and recommendations are listed below:

1. Visible soil staining and dead vegetation were observed beneath the API separator and down the levee of the equalization basin. This staining and dead vegetation apparently is the result of a release from the API separator. This release apparently was a large enough volume to flow down the levee of the equalization basin into a drainage ditch. No analysis of the API separator sludge was available and it was reported that several instances of overtopping have occurred. The sludges from this unit have been placed into the equalization basin. It is recommended to sample the API separator sludge, visible soil staining, sediment in the drainage ditch, and sample sludge within the equalization basin.
2. An unidentified metal tank was observed near the equalization basin that was used in the past to store API separator sludge. This tank should be sampled. The facility should provide dates of use, nature of contents, and any other information such as closure in the Preliminary Report and include sampling within the FIWP.
3. It is recommended that the sludges of the aeration basin, clarifiers and polish pond be sampled. Clarifier solids were reported to be placed into the aeration basin and the nature of the sludge is unknown. Oily residues were present in most of the impoundments and all impoundments were aerated, including the final polish pond. Perhaps when Cedar added the dichloroaniline unit (DCA) it required additional aeration to be done. An evaluation of the sludges has not been done since the DCA unit was constructed.
4. A non-metallic storage tank was located between the equalization basin and aeration basin that has been used through 1991. The tank reportedly has contained various waste streams from the production units. The facility must provide information on this tank and include sampling of the tank and soils in the FIWP.



5. The stormwater pond had been partially dredged and the sediments were placed onto the ground adjacent to the pond. It did not appear that the storm water pond was functional by gravity flow (as designed) in its present state. Sediments have been dredged from the pond and placed onto the ground at least one time prior to the current waste pile according to the facility. The potential for contaminated sediments is evident and the waste pile(s) must be sampled in the FIWP.
6. A vacant lot located beside the waste water treatment plant has a levee constructed around its perimeter. Although little information was gained in the site visit it does appear that this was constructed as a retention structure. Aerial photographs and central files were reviewed to determine the potential use of this area. It appears that the site may have received stormwater from the west side of plant and effluent from the old treatment ponds. The review in central files indicated in a 6-12-78, memo that this area had been used as a reserve oxidation pond. Sampling of sediments is warranted for this potential and should be included in the FIWP.
7. Extensive visible staining (yellow) was observed at the facility. Early reports indicated that the yellow stained areas were where a previous operator buried drums of dinoseb. These areas of visible staining must be shown on a map and thoroughly investigated. I recommend that soil investigations be expanded to include areas not identified in the FIWP. Yellow staining was observed in the following locations:
  - a. Between the DCA unit and a shop north of the unit.
  - b. North of tank farm.
  - c. Boiler room/Store Room Warehouse (Vault containing drums in foundation).
  - d. East of store room across pavement in area of fire hydrant.
  - e. South side of new drum storage area.
  - f. South side between production units 4 and 5.
  - g. East and south sides of new warehouse. Yellow stained water was observed in a hole south of the warehouse discharging into the storm water ditch west of the warehouse which also was observed to have black staining up-gradient toward production area.

The FIWP must include provisions to investigate these areas for the potential of buried drums and soil contamination.

cc: Mike Bates  
Central Files  
Phil Murphy



SUBJECT: Truck to transport contaminated  
 LOCATION: Cedar Chemical, near plant  
office  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1030 Am  
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 1 of 9

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*



SUBJECT: Staging area for drums  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1035 Am  
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 2 of 9

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*



SUBJECT: Pit & old waste drums  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1049 Am  
 WEATHER: (SUN) [HAZE] [CLOUDY] [RAIN] [SNOW]  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 3 of 9





SUBJECT: Pst Cold waste drums  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1102 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 4 of 9

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*

SUBJECT: Waste drum in Salvage drum  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1104 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Division)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 5 of 9

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*

SUBJECT: Waste drums in pit  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1109 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: - T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 6 of 9





SUBJECT: Waste drum placed in bucket  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1116 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shurt  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 7 of 9

OFFICIAL PHOTOGRAPH



SUBJECT: Waste Drum placed in staging area  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1117 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shurt  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 8 of 9

OFFICIAL PHOTOGRAPH



SUBJECT: Waste drums from pit  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1123 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shurt  
 WITNESS: Jay Freibolt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 9 of 9





OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

\*\*\*\*\*

SUBJECT: OVERVIEW FOR EXCAVATION OF EXCISE

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 0950

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): Jay Trubitt

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal Mart

PHOTO #: 1 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

\*\*\*\*\*

SUBJECT: Same as #1

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 0951

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): Jay Trubitt

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal Mart

PHOTO #: 2 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

\*\*\*\*\*

SUBJECT: Excavation Zone and Support Zone

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1109

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): Jay Trubitt

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal Mart

PHOTO #: 3 of 19





OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: Earth Dam across drainage ditch  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 11/12  
WEATHER: [SUN] [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.): Jay Trubett  
WITNESS: John Wagner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 4 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
\*\*\*\*\*

SUBJECT: Beginning of excavation / asphalt + LIRT  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1300  
WEATHER: [SUN] [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.):   
WITNESS:   
CAMERA:   
FILM TYPE:  ASA:  T: 1/ f:   
NEGATIVE LOCATION:  FILE #:   
PROCESSED BY:   
PHOTO #: 5 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: Same as # 5  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1300  
WEATHER: [SUN] [HAZE] [CLOUDY] [RAIN] [SNOW]  
PHOTOGRAPHER (Sig.): Jay Trubett  
WITNESS: John Wagner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 6 of 19





OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

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SUBJECT: Test Pit #2

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1400 hrs

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.) John Waggoner

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 7 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

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SUBJECT: Test Pit #2 PID reading 80 ppm

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1430

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.) John Waggoner

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 8 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

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SUBJECT: Test Pit #2

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1430

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.) John Waggoner

WITNESS: John Waggoner

CAMERA: Canon Sure Shot

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 9 of 19





SUBJECT: Test Pit # 2 Overview  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1550  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): John Waggoner  
WITNESS: John Waggoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 10 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
\*\*\*\*\*

SUBJECT: Overview of Test Pit Area  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1555  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): John Waggoner  
WITNESS: John Waggoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 11 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: Same as # 11  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1556  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): John Waggoner  
WITNESS: John Waggoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 12 of 19





SUBJECT: Test Pit #3 Excavation  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1600  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jay Freibolt  
WITNESS: John Wagoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 13 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: Hot Zone Pit #1  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1630  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Cleo Dunn (CWM)  
WITNESS: Jay Freibolt  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 14 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: Hot Zone Pit #2  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1630  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Cleo Dunn (CWM)  
WITNESS: Jay Freibolt  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: Wal Mart  
PHOTO #: 15 of 19





SUBJECT: Hot Zone Pit #3  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1630  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Joe Fritchett  
 WITNESS: Jan Fritchett  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 16 of 19

OFFICIAL PHOTOGRAPH

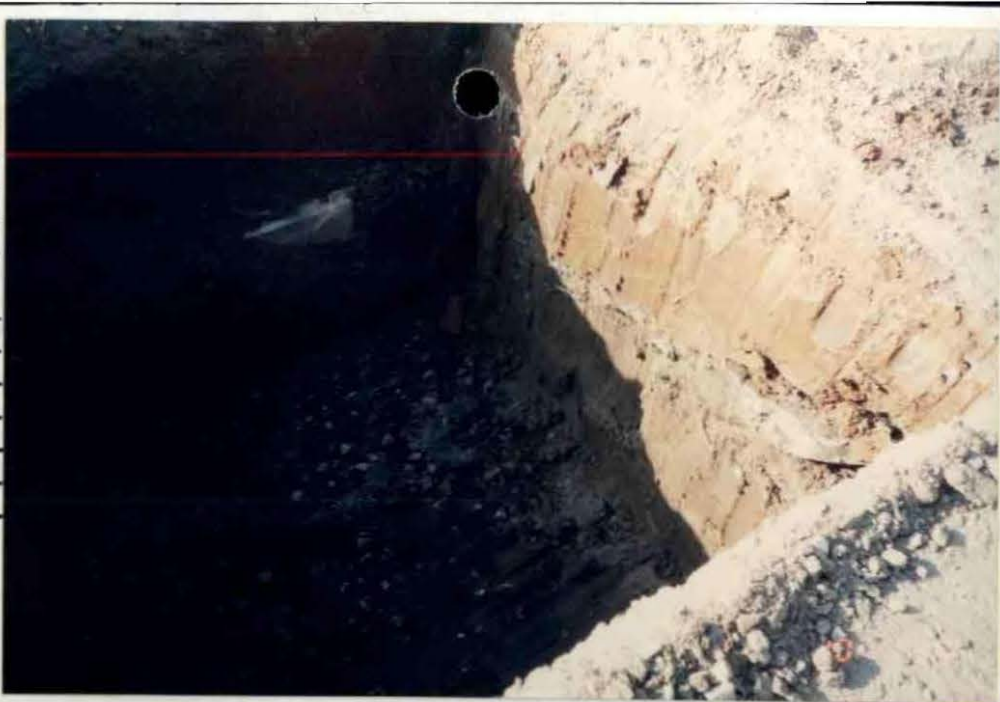
Arkansas Department of Pollution Control & Ecology

SUBJECT: Soil Sample Pit #1  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1700  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Joe Fritchett  
 WITNESS: Scott Blair (CWM)  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 17 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Soil Sample from Pit #2  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1730  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Joe Fritchett  
 WITNESS: Scott Blair (CWM)  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 18 of 19





Arkansas Department of Pollution Control & Ecology  
SUBJECT: Soil Sample from Pit #3  
LOCATION: Cedar Chemical  
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1815  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): [Signature]  
WITNESS: Scott Blair (CWM)  
CAMERA: CANON SLR  
FILM TYPE: 35 ASA: 200 T: 1/ f:   
NEGATIVE LOCATION: HW FILE #:   
PROCESSED BY: WAL MART  
PHOTO #: 19 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology



SUBJECT: \_\_\_\_\_  
LOCATION: \_\_\_\_\_  
CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ STATE: \_\_\_\_\_  
DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): \_\_\_\_\_  
WITNESS: \_\_\_\_\_  
CAMERA: \_\_\_\_\_  
FILM TYPE: \_\_\_\_\_ ASA: \_\_\_\_\_ T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: \_\_\_\_\_ FILE #: \_\_\_\_\_  
PROCESSED BY: \_\_\_\_\_  
PHOTO #: \_\_\_\_\_ of \_\_\_\_\_

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: \_\_\_\_\_  
LOCATION: \_\_\_\_\_  
CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ STATE: \_\_\_\_\_  
DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): \_\_\_\_\_  
WITNESS: \_\_\_\_\_  
CAMERA: \_\_\_\_\_  
FILM TYPE: \_\_\_\_\_ ASA: \_\_\_\_\_ T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: \_\_\_\_\_ FILE #: \_\_\_\_\_  
PROCESSED BY: \_\_\_\_\_  
PHOTO #: \_\_\_\_\_ of \_\_\_\_\_



54-0068

CSN: ..... PERMIT NO. ....  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE

ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

TO : Joe Hoover, Enforcement Branch Administrator, HWD  
THROUGH : Jim Rigg, Ground Water Branch Supervisor, HWD  
FROM : David Hartley, Ground Water Branch Geologist, HWD DH  
DATE : January 21, 1992  
SUBJECT : CEDAR CHEMICAL CORPORATION CAO LIS 91-118  
REVIEW OF FACILITY INVESTIGATION PRELIMINARY REPORT AND  
FACILITY INVESTIGATION WORK PLAN SUBMITTED OCTOBER 1990

=====

I have reviewed the referenced documents and found the following deficiencies and provide comments.

**Facility Investigation Preliminary Report**

- Page 4 - Section 2.1 It is stated that there are no domestic wells within one mile of the facility. Sufficient documentation is not presented to support this statement. It is recommended that documentation be provided that identifies all landowners, within a reasonable radius around the facility, who were contacted and interviewed to determine if any wells are present, being used, have potential for use or plan to install wells for any purpose. This is essential data, to fully complete the investigation of ground water contamination. Contamination is known to exist in down gradient wells adjacent to their property line. This data will be the basis for notifying landowners of the potential for contamination and contacts to gain access to property for investigative and remedial purposes. If this data does not exist, it is appropriate to include this task in the work plan.
- Page 7 - Section 2.2.2 Provide a discussion of past RCRA activities and RCRA wastes managed at the facility.
- Page 8 - Includes waste code, volume and process that generated all wastes.
- Page 13 - Section 2.4 Include all reference to RCRA Interim Status operations at the facility and reference to withdrawal of interim status of all units that were regulated including dates of approval.



- Page 15 - Section 3.1.2 Provide greater detail on the investigation and findings on the biological treatment system which were done under the previous CAO. The analysis of the sludge from all of the impoundments including the location and depth of the samples must be included for reference to evaluate the release potential of these units.
- Page 16 - Section 3.1.3 Provide reference to samples taken from the Biological treatment system under previous CAO. Information is relevant to soil contamination.
- Page 16 - Section 3.1.4 Comment: Upper low permeability zones would tend to retard vertical migration of contaminants, however, it is noted that well cluster (MW6, MW6A, MW6B, MW6C) indicate highest concentrations in the upper (B and C) zones. The potential for ground water contamination is apparent and is known to exist. Sufficient data has not been collected to characterize all zones of contamination at the site.
- Page 18 - Section 3.2 Include status of all SWMU's identified in RFA and justification for RFI.
- Page 22 - Section 3.2.9 Provide the approximate data these drums were disposed of or the date the warehouse was constructed.

A number of maps required in the scope of work for a facility investigation at Cedar Chemical Corporation, as referenced by CAO LIS 91-118 are not included. These include:

1. General geographic location map.
2. Ownership map.
3. Surface drainage map depicting all wetlands, flood plains, water features, natural and man made drainage patterns and NPDES outfalls.
4. Map showing all utilities, paved areas, easements and piping.
5. Map of all past and present SWMUs.
6. Map with location of all production wells, monitoring wells, piezometer and private water wells.
7. Locations of all previous environmental investigations.
8. Locations of spill, date and type of material.
9. Regional geologic map(s) to support the regional geologic units in Paragraph 2.3.2. Structural cross sections may be necessary to make this demonstration and should be included.



Appendix A - Include construction documentation for monitoring wells and designate correct well numbers.

Appendix B - Include discharges that led to previous CAO including volume of wastes.

It would be appropriate to include an appendix that summarized the closures and investigations that were done under the previous CAO. This could form the basis of investigating or not investigating SWMUs identified in the RFA.

#### **FACILITY INVESTIGATION WORK PLAN (FIWP)**

The deficiencies noted in the preliminary report will obviously impact this work plan. This review is preliminary and may change this plan as the deficiencies noted in the preliminary report are addressed. I recommend that a site visit be done before final comments are drafted in response to this work plan.

Preface      The primary purpose of the FIWP is to determine if hazardous constituents have been released from SWMUs as stated, however, it is necessary to evaluate the nature and extent of all contaminants released from these units including "non-hazardous" constituents such as sulfates and nitrates.

Page 4 -      Section 1.2.2    The initial samples collected at the facility are proposed to be analyzed for volatile organic compounds, semi-volatile organic compounds, chlorinated pesticides and chlorinated herbicides. It is necessary to expand the parameter list to include primary drinking water standards (Appendix III), secondary drinking water standards and other constituents representative of facility waste streams. At a minimum I recommend adding the following constituents to the proposed parameters: arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, chloride, fluoride, nitrate, sulfate, ammonia, sodium and cyanide. These additional parameters are necessary in the ground water monitoring program to evaluate background conditions in order fully evaluate the facility's impact on ground water quality.

Page 6 -      Section 1.2.6.1    Elaborate on head space analysis technique and criteria for additional organic analysis of soil samples.

Page 7 -      Section 1.2.6.2    Soil boring cores should be split in two, photographed, and visually logged. Samples should also be obtained for physical properties analysis (grain size and Atterburg limits). Samples for physical properties should be obtained at least at every change in lithology and soils with more than 50% passing a No. 200 sieve need Atterburg limits testing. Coarser soils (less than 50% passing a No. 200 sieve) need grain size analysis and atterburg limits utilizing dual classification in the unified soil classification system except when the sample contains less than 5% passing the number 200 sieve. Continuous cores are recommended in this boring program to assure an adequate number of samples can be obtained. Include provisions for handling, storage, analysis, and disposal of cuttings.



- Page 7 - Section 1.2.6.3 Include provisions to allow an adequate amount of time to establish ground water level before installing well. I recommend that the boreholes be left open for 24 hours before well installation to evaluate perched water conditions. The same protocols stated in my comments to Section 1.2.6.2 should be utilized for sampling these boreholes.
- Page 12 - Section 1.2.6.4 Include provisions for containing, analysis, storage and disposal of water purged from the wells.
- Page 13 - Section 1.2.6.4. The non-aqueous phase liquid testing shall be done independent of photoionization detector (PID) readings.
- Page 14 - Section 1.2.6.5 Include provisions to establish proper flow rate for sampling when bladder pumps are used.
- Page 15 - Section 1.3.1 In this section, the facility has proposed a ground water monitoring plan. The facility apparently does not understand the purpose of this section of the work plan. This section would more appropriately be titled Ground Water Quality Assessment Plan and should be capable of doing just that. This plan must go beyond installation of additional wells and sampling for one year. It should establish criteria when additional work is required with a logical approach of determining the nature of contamination, horizontal and vertical extent of contamination, and develop a sufficient data base to enter into a corrective action plan if necessary. The additional parameters listed in my comment to Section 1.2.2 are necessary in this ground water monitoring program.
- Page 15 - Section 1.3.2 Include provisions to sample sediment (sludge) in the impoundment.
- Page 17 - Section 1.3.3 Include a plan to sample soils within these closed impoundments and to investigate extent of soil contamination.
- Page 19 - Section 1.3.4 Sample sediment within the stormwater pond and outfall 001 (industrial park ditch).
- Page 23 - Section 1.3.6 The design of the drum vault located in the foundation of maintenance services warehouse is unknown therefore its ability to contain a release is unknown. I recommend that the plan include a provisions to sample soils within the vault by drilling hole(s) through the foundation. There remains a possibility that these drums may contain liquid and the vault was not designed so that liquids could be removed. If wastes are to be left in place this unit must have a plan for long term monitoring because the existing monitoring wells are not adequately located for the immediate detection of a release into the ground water.



Page 25 - Site #6 Provide a map showing all areas with visible soil staining. Continuous cores should be taken during this boring program. Coring should be done to the top of the water table. The facility should present the rational for physical properties analysis of the soil cores. It was reported in the Ecology and Environment memo (July 29, 1986) that the yellow stained areas contained buried drums and this possibility must be investigated.

Other Areas I have reviewed our files and aerial photographs and have determined that there is a high potential of other drum burial areas and other storage areas that require further investigation. Perhaps a meeting with the facility in the near future would be appropriate to present these findings. I plan to make a site visit in the near future which may also add other areas of concern.

The facility should be advised to follow the outlines attached to the CAO and the RFA to avoid future deficiencies. A detailed air-photo analysis could be utilized to direct the facility investigation to specific areas of past storage and disposal areas.

*Cedar*  
*36*  
*JAN U 6 1993*

# CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

January 4, 1992

Mr. Joe Hoover  
Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
P.O. Box 8913  
Little Rock, AR 72219-8913

Re: Facility Investigation Progress Report - Fourth Quarter 1992

Dear Mr. Hoover:

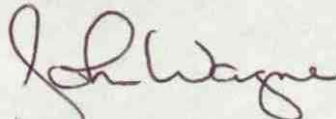
In accordance with Consent Administrative Order (CAO) LIS 91-118, Task V:B of the Scope of Work for a Facility Investigation, this progress report is submitted for the fourth quarter of 1992.

Approval of the Facility Investigation Preliminary Report was received on December 21, with the Facility Investigation Work Plan now due on January 20, 1993.

Included with the approval was a notice of deficiencies relating to the second revision of the Preliminary Report. The approval is conditional upon correction of the deficiencies which may be accomplished in the Work Plan.

Future quarterly progress reports required by the CAO will be submitted within thirty days following the end of each quarter.

Sincerely,



John Wagner

cc: Ms. Pat Crossley  
Mr. Allen Malone



MB N  
ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

To: Mike Bates, Chief

Through: Jerry Williams, Technical Division *JSW*  
Joe Hoover, Enforcement Division *JSW*

From: Phillip Murphy *PM*

Date: December 19, 1991

Regarding: Cedar Chemical Facility Investigation Report

Attached are comments regarding the Preliminary Investigation Report for Cedar Chemical company.

1. Cedar should investigate the condition of the concrete sumps and ditches associated with SWMUs 1, 2, 4-7, 10-14, 20, 21, 22, 25, 26, 27, 31, 32, 37, 38, 40, 41, and 42.
- 2 The facility should investigate the drum crushing area, SWMU 47.
3. Cedar should investigate the waste oil drum, SWMU 51.

Maps

1. The map should show the owners of the adjoining property.
2. Maps should show locations of SWMUs and, the location of all yellow stained areas. The map should show storage, treatment and disposal facilities currently in use for solid wastes.
3. Maps should show any past and present underground storage tanks.
4. The map included does not clearly show the drainage patterns, waterways, floodplain, waste features, and surface water contamination areas.

Site History

1. Describe solid wastes generated during the production of dinoseb. The description should include a list of the solid wastes generated during the production of the dinoseb and any hazardous substances generated during the treatment or disposal of the dinoseb waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.



2. The RFI, performed by A. T. Kearney, Inc., indicated production of methoxychlor occurred on the site. Describe solid wastes generated during the production of methoxychlor. The description should include a list of the solid wastes generated during the production of the methoxychlor and any hazardous substances generated during the treatment or disposal of the methoxychlor waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of.
3. The RFI, performed by A. T. Kearney, Inc., indicated production of benzene sulfonyl chloride occurred on the site. Describe solid wastes generated during the production of benzene sulfonyl chloride. The description should include a list of the solid wastes generated during the production of the benzene sulfonyl chloride and any hazardous substances generated during the treatment or disposal of the benzene sulfonyl chloride waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.
4. The RFI, performed by A. T. Kearney, Inc., indicated production of SCI (proprietary product for Schenectady Chemicals, Inc.) occurred on the site. Describe solid wastes generated during the production of SCI. The description should include a list of the solid wastes generated during the production of the SCI and any hazardous substances generated during the treatment or disposal of the SCI waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.
5. The RFI, performed by A. T. Kearney, Inc., indicated production of methylthiopinacolone oxide (MTPO) occurred on the site. Describe solid wastes generated during the production of MTPO. The description should include a list of the solid wastes generated during the production of the MTPO and any hazardous substances generated during the treatment or disposal of the SCI waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.
6. The RFI, performed by A. T. Kearney, Inc., indicated production of arsenicals (MSMA) occurred on the site. Describe solid wastes generated during the production of arsenicals. The description should include a list of the solid wastes generated during the production of the arsenicals and any hazardous substances generated during the treatment or disposal of the arsenical waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of



treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.

7. The RFI, performed by A. T. Kearney, Inc., indicated production of lannate occurred on the site. Describe solid wastes generated during the production of lannate. The description should include a list of the solid wastes generated during the production of the lannate and any hazardous substances generated during the treatment or disposal of the SCI waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.
7. Cedar must describe solid wastes generated in production of any products since the RFI by A. T. Kearney, Inc.. The description should include a list of the solid wastes generated during production the products and any hazardous substances generated during the treatment or disposal of the solid waste. If treatment or disposal of wastes occurred on-site, the method of disposal, location of treatment or disposal unit, quantity of waste treated or disposed of, and identity of waste treated or disposed of. A detailed chemical analysis should be submitted for each waste stream generated.
8. The current site operations should contain a list of chemical constitutes used to produce the products made at Cedar. The list should include raw materials, intermediates, finish products, and waste material produced.
9. The description of the ponds used to dispose of waste during the time period 1971 to 1973 should contain a description of the waste disposed of in the ponds. The description should contain a list of the chemical constituents disposed of in the ponds.

#### Permits and Enforcement Actions

1. A copy of the reports generated by the investigations required by the Notice of Violation should be included in the Preliminary report.



7

ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

CSN: 54-008 PERMIT NO. ....  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE  
FEES:

To: Mike Bates, Chief

Through: Jerry Williams, Technical Division *for*  
Joe Hoover, Enforcement Division

From: Phillip Murphy *PM*

Date: December 19, 1991

Regarding: Cedar Chemical Facility Investigation Workplan

- 1.3.2
1. Submit any data that shows air releases are not a significant contaminant pathway for the wastewater treatment area (SWMU 63, 64, 65, 68). If no data is available, the work plan must contain a plan for air monitoring around the wastewater treatment area.
  2. The work plan must include a sample of the sludge in the active wastewater treatment facility. The work plan should include a complete TC scan.
  3. In a citizens complaint investigation No. 78C0118, the complaint report indicated a rupture of a treatment line. The workplan must investigate the soils in area of the release. The workplan must also detail how any underground sewer lines will be investigated for possible releases.
  4. During the site visit of December 11, 1991, a soil stain from a spill of the organic layer from the API separator was observed going into a ditch. The workplan must include soil samples from the area stained by spills and from the ditch where the spill entered the stream.
  5. During the site visit of December 11, 1991, Cedar personnel stated the tank located near the compressor house in the wastewater treatment area was used to hold process waste from the propanil process. It was also noted that the tank leaked. The workplan must include soil sampling around the tank.
- 1.3.3
1. Submit any data that shows air releases are not a significant contaminant pathway for the closed surface impoundments (SWMU 69, 70, 71). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.



2. The workplan should contain a plan to monitor the surface water runoff from the closed surface impoundments, area of concern number one, and the railroad loading area. The analytical method to be used for the chlorinated pesticides is EPA method 8080.
  3. The work plan must include soil samples of the soils in the closed impoundments. A grid system with a random sampling method must be proposed to survey the condition of the soils. Soil borings must be included in the investigation of the closed impoundments.
- 1.3.4
1. Submit any data that shows air releases are not a significant contaminant pathway for the storm water system (SWMU 59, 60). If no data is available, the work plan must contain a plan for air monitoring around the storm water area.
  2. During the site visit of December 11, 1991, Cedar personnel stated the storm water pond had been dredged on at least two occasions. The dredge material from the ponds was used as fill for the area around the storm water ponds. The workplan must include soil borings of the soils around the storm water pond. The workplan must include provisions to analyze the soils from the borings for chemicals used or produced during the life of the plant.
  3. Cedar must investigate sediments in the receiving stream for NPDES outfall 001. The workplan must include a sampling plan for the investigation of the sediments in the receiving stream.
- 1.3.6
1. The soil sampling for the Area of Concern #1 must be expanded to include all yellow stained areas. Cedar shall make a grid system in areas where yellow staining is not evident. A sample should be taken randomly from each of the grids. The samples shall not be composited. The soil samples should be analyzed for volatile and semi-volatile organics, pesticides, and heavy metals. If a detectable concentration of any of the TC constituents listed in 40 CFR 261.24 is found above normal back ground level, Cedar shall perform a TC analysis for that constituent.

SWMU not in Workplan

1. The workplan should include a strategy to investigate the condition of the concrete sumps and drainage channels in the current production areas. The workplan should include a requirement for a certification from an independent registered engineer of the condition of the concrete sumps and ditches.

2. The facility should investigate the drum crushing area, SWMU 47.
3. Cedar should investigate the waste oil drum, SWMU 51.
4. Cedar must investigate soils in the lowland area on the south west side of the wastewater treatment area.

1.4.7 1. The analytical section of the workplan must indicate Cedar will report any concentrations of organics not listed on the target chemical list indicated during the analysis of any soil, water or air samples analyzed during the RFI. If Cedar can identify the organics not on the lists, Cedar must indicate the identity and the concentration of the chemical.

- 1.4.1.2 1. The Waste Analysis Plan for soils should be expanded to include analysis for cyanide and heavy metals.
2. The Waste Analysis Plan must include a procedure to obtain a background soil sample. The background soil sample shall be analyzed for heavy metals.
3. The work plan must provide a mechanism for written notification of ADPC&E at least five days prior to a sampling event to provide ADPC&E an opportunity to obtain split samples.



**To:** File

**Through:** David Harley, Ground Water *DH*  
Jerry Williams, Technical Division *JW*  
Joe Hoover, Enforcement Division  
Mike Bates, Chief  
Sam McMullen, Air

**From:** Phillip Murphy

**Date:** December 12, 1991

**Regarding:** Cedar Chemical Site Visit

David Hartley and I visited Cedar Chemical in West Helena on December 11, 1991 to see the SWMUs identified in the facility investigation preliminary report submitted in compliance of a CAO. The report was submitted in October, 1991. David and I were escorted by Mr. John Wagner, Environmental Engineer, of Cedar Chemical while we were on-site.

The first SWMUs visited during the visit was the wastewater treatment area. The wastewater treatment area consists of the equalization basin, aeration basin, clarifier, API separator, and the polishing pond.

The wastewater enters the wastewater treatment area via an underground sewer. Sam McMullen of the air division investigated a complaint, No. 78CO118, about odors from Cedar (then called Eagle River Chemical Company) on 6-12-78. The investigation revealed a broken process sewer line between the plant and the wastewater treatment area. Mr. McMullen stated in the investigation report that the process wastewater was diverted into a "reserve oxidation pond". During an interview with Mr. McMullen On December 12, 1991, Mr. McMullen stated the "reserve oxidation pond" was an area to the west of the wastewater treatment area with man-made levees. Mr. McMullen identified an area west of the wastewater treatment area as the "reserve oxidation pond" from an aerial photograph taken by Arkansas Highway Department on 10/3/79. Aerial photograph taken by Arkansas Highway Department on 11/30/74 indicate storm water from the plant drained into the area where "reserve oxidation pond" existed. According to Mr. Wagner, the "reserve oxidation pond" has been declared a wetland by the Corps of Engineers. Cedar will be requested to investigate the "reserve oxidation pond" and the underground process sewer during the RFI.

The wastewater is treated in an API separator. There was a large oil stain entering a ditch that flowed beside the wastewater treatment area. Mr. Wagner stated the discharge from the oil and water separator had occurred more than once. A complaint has been filed with the NPDES section for such releases. Cedar will be requested to investigate releases from the API separator during the RFI.



The sludge and the organic layer from the API separator is pumped into the equalization basin. Mr. Wagner stated there was no analysis of the sludge or organic layer. Cedar will be requested to perform a constituent and a TC analysis of the sludge and the organics from the API separator.

A fiberglass tank was located by the compressor house in the wastewater treatment area. Mr. Wagner stated process waste from the propanil process was fed into the wastewater treatment plant. Mr. Wagner stated the tank had leaked. Cedar will be required to test soils around the fiberglass tank in the RFI.

After the wastewater leaves the API separator, the water enters the wastewater treatment basins. There was a strong organic odor emanating from the wastewater treatment area. Cedar will be requested to provide air monitoring around the wastewater treatment area during the RFI. Cedar will be requested to perform a TC analysis of the sludge generated in the wastewater treatment area.

The next area investigated was the storm water pond. At the time of the visit, the storm water pond was heavily silted. According to the NPDES permit, Cedar must retain the first 100,000 gallons of storm water run off. Judging from the condition of the pond, there is no way that Cedar can meet the NPDES permit. NPDES has been advised of the condition of the storm water pond. Mr. Wagner stated a Toxic Reduction Evaluation (TRE) was required by NPDES due to acute toxicity of the storm water run-off to daphnia and fathead minnows. Cedar will be required to analyze the sediment in the ditch that receives the storm water run-off in the RFI.

Mr. Wagner stated the storm water pond had been dredged on two occasions. The dredge material from the storm water pond was disposed of as fill around the storm water pond. Mr. Wagner also stated a broken pipe with unknown material in the pipe was found in the storm water area. Cedar will be required to investigate the soils around the storm water pond.

The storm water ditches leading to the storm water pond were coated with a black oily organic. Cedar will be required to expand the soil sampling in the ditches in the RFI.

The whole facility had extensive yellow staining of the soils. One of the products previously manufactured at Cedar was Dinoseb, 2-(1-methylpropyl)-4,6-dinitrophenol. Dinoseb has a hazardous waste identification number of P020. The salts of dinoseb are an azo compound. Azo compounds are widely used as dyes. Yellow stained areas are probably contaminated with Dinoseb salts. Cedar proposes in the workplan to sample only random sites of the yellow stained soils. The NOD will required Cedar to sample all of the yellow stained areas. The NOD will also request the yellow stained areas be clearly indicated on site maps.



Cedar has two closed impoundments located on-site. The impoundments were closed by filling with soil. An organic odor was observed when we entered the area around the closed impoundments.

We walked under the process units to observe the condition of the concrete sumps and ditches under the process units. Generally, the concrete under the units was cracked. It was also obvious the concrete was chemically deteriorated by condensate and chemicals. Cedar will be required to investigate possibility of releases from the process areas.

Evidence of spills were observed close to TD-204. A tank marked waste acid had a hose connected to the tank. At the end of the hose, a black stain was observed. One of the tanks had sulfuric acid stenciled to the side of the tank. Sulfuric acid turns black when exposed to air. A puddle was observed to have an organic phase in the water. The surface of the mud puddle had a black oily areas on the surface.

The waste oil drum, SWMU 51, and the drum crushing area, SWMU 47, were SWMUs identified as needing further investigation in the RFA EPA performed in 1988 but were not observed during the site visit. According to Cedar personnel, these facilities do not exist at this time.



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-4632



December 11, 1991

Mr. John Wagner  
Cedar Chemical Corporation  
PO Box 2749  
West Helena, AR 72390

CSN: 54-0068 PERMIT NO. ....  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE  
FEES

Dear Mr. Wagner:

Your letter of December 9, 1991, concerning generator accumulation of hazardous waste has been received and reviewed by Department staff.

In the future you should make arrangements to utilize an alternate TSD facility in order to avoid exceeding the regulatory timeframe.

Pursuant to the provisions of 40 CFR 262.34(b) as adopted by reference in Section 3 of the Arkansas Hazardous Waste Management Code, you are hereby granted a thirty (30) day extension for generator accumulation of hazardous waste. The extension only applies to the description of waste referenced in your letter.

You must submit a copy of the dated manifest to this Department within three (3) days of shipment as proof of compliance with the above referenced extension. If you have any questions in this matter, please feel free to call Dennis Green of my staff at (501) 570-2895.

Sincerely,

Randall Mathis  
Director

DG: CEDAREXT.WPC;1

cc: Dennis Green, HWD



Central

ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

CSN: 54-0068 PERMIT NO. ....  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE

TO : Dick Quinn, Asst. Chief Water Div. **FEES**  
THROUGH : Joe Hoover, HWD Enf. Branch Mgr. *[initials]*  
FROM : Dennis Green, Insp. Supervisor HWD *DR*  
DATE : November 12, 1991  
SUBJECT : Disposition of Accumulated Stormwater at Cedar Chemical

=====

Cedar Chemicals request to treat the accumulated stormwater described in the letters dated October 30, 1991 to Mike Core, and November 8, 1991, to Joe Hoover, meets the approval of the Hazardous Waste Division. This approval is based on that the water does not meet the definition of a Hazardous waste as described under 40 CFR 261.3.

Cedar Chemical should note that any contamination from spillage from the removal of the drums into the water or on the land would be subject to RCRA regulations.

## CEDAR CHEMICAL CORPORATION

## DNBP Analytical Report Sheet

Source PITS AT drum siteDate 10/3/91Type soilOperator G.S.Color brownComments/Notes 3 pits out lining buried  
drum site at various depths.

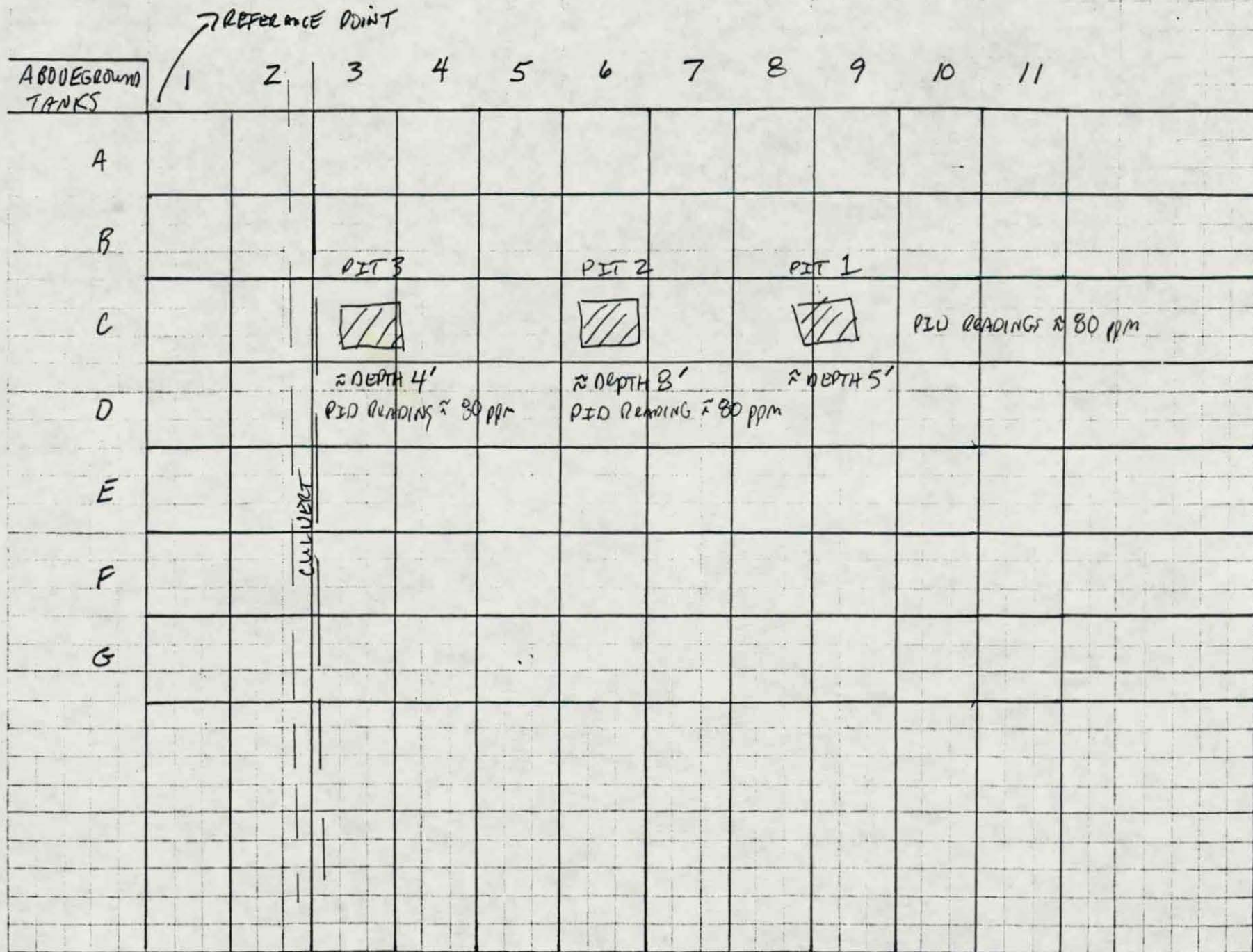
| <u>Sample Code</u>       | <u>Results (mg/kg) - DNBP</u> |
|--------------------------|-------------------------------|
| <u>1A</u>                | <u>1.6</u>                    |
| <u>1B</u>                | <u>60</u>                     |
| <u>1C</u>                | <u>702</u>                    |
| <u>1D</u>                | <u>2753</u>                   |
| <u>2A</u>                | <u>4.5</u>                    |
| <u>2B</u>                | <u>19.8</u>                   |
| <u>2C</u>                | <u>1637</u>                   |
| <u>2D</u>                | <u>1970</u>                   |
| <u>3A</u>                | <u>2.9</u>                    |
| <u>3B</u>                | <u>1.1</u>                    |
| <u>3C</u>                | <u>1.6</u>                    |
| <u>3D</u>                | <u>1.4</u>                    |
| <u>E Pit (Sample #1)</u> | <u>2010</u>                   |



|                                      |             |              |              |
|--------------------------------------|-------------|--------------|--------------|
| SUBJECT Cedar Chemical Sampling Grid |             | Date 10/1/91 | Sheet 1 of 1 |
| Job No. 73379                        | Made by BMM |              |              |
| Ref. BUERO DRUMS                     | Checked     |              |              |
|                                      | Reviewed    |              |              |

N 4

PLANT



10' X 10' MATRIX



ARKANSAS DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

MEMORANDUM

TO : CENTRAL FILES

THROUGH : DENNIS GREEN, SUPERVISOR, ENFORCEMENT BRANCH, HWD *OK*

FROM : JAY FREIBOLT, INSPECTOR, ENFORCEMENT BRANCH, HWD *14*

DATE : OCTOBER 16, 1991

SUBJECT : SPLIT SAMPLING OF CONTAMINATED SOIL AT CEDAR  
CHEMICAL COMPANY-WEST HELENA, ARKANSAS

=====

On October 1, 1991, I met with officials from both Cedar Chemical and Chemical Waste Management, to discuss soil sampling, removal and disposal of soil and debris from buried drums, contaminated with DNBP (Dinoseb), a banned pesticide.

Three (3) test holes were dug for sampling purposes on this date. (See attached photographs). Also attached is a sketch of the test pit areas, where soil samples were taken. Approximately 1630 hrs. all soil samples were taken to Cedar Chemical's lab for analysis. (See attached analytical report).

On October 9, 1991, James Shumate, ADPC & E inspector and I returned to Cedar Chemical, to observe drum removal from the pit area. Several containers were removed that were empty, while others contained liquid in them. (See attached photographs). Chemical Waste Management personnel stated to me that since the excavation process began, two (2) other hazardous constituents were found in addition to (PO20) DNBP. The waste were: U-220 Toulene and U-239 Xylene.

The soil is being loaded in end-dump trailers and manifested off site to Chemical Waste Management in Carlyss, La. for landfill. The drums are placed in over paks and will be incinerated at the Port Arthur, Texas facility of CWM.

It appears that the remediation process may be lengthy, due to the length of time the drums have been buried and their condition. I have had several telephone conversations with Mr. Wagner in reference to the remediation of the site, and he is to keep me abreast of any occurrence.

jf/MM1

Enclosures

cc: Joe Hoover  
James Shumate



## CEDAR CHEMICAL CORPORATION

## DNBP Analytical Report Sheet

Source Pits at drum siteDate 10/3/91Type soilOperator GLColor brownComments/Notes 3 pits out lining buried  
drum site at various depths.

Sample Code

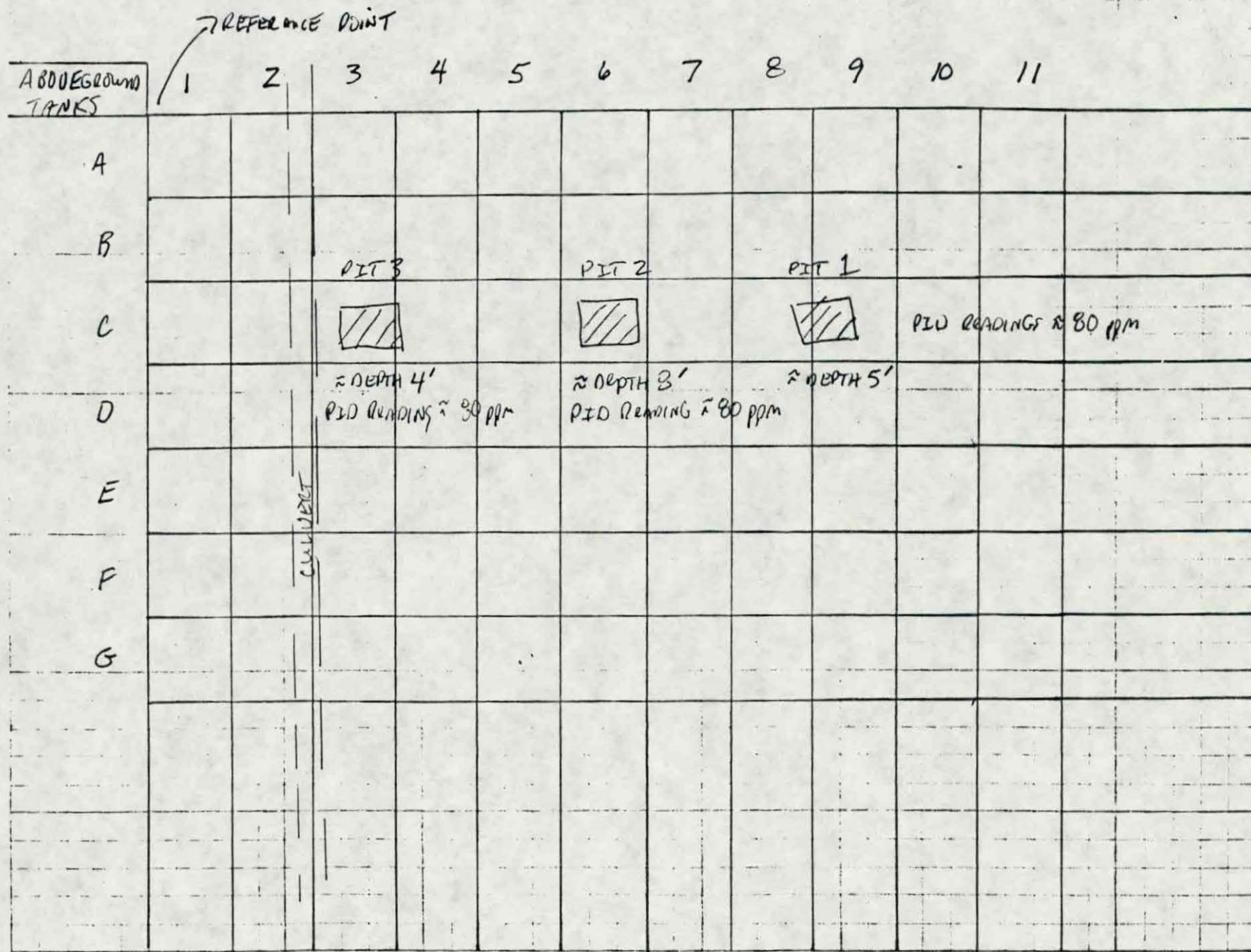
Results (mg/kg) - DNBP

|                   |      |
|-------------------|------|
| 1A                | 1.6  |
| 1B                | 60   |
| 1C                | 702  |
| 1D                | 2753 |
| 2A                | 4.5  |
| 2B                | 19.8 |
| 2C                | 1637 |
| 2D                | 1970 |
| 3A                | 2.9  |
| 3B                | 1.1  |
| 3C                | 1.6  |
| 3D                | 1.4  |
| E Pit (Sample #1) | 2010 |

|                                      |             |              |              |
|--------------------------------------|-------------|--------------|--------------|
| SUBJECT Cedar Chemical Sampling Grid |             | Date 10/1/91 | Sheet 1 of 1 |
| Job No. 73379                        | Made by BMM | Checked      | Reviewed     |
| Ref. BUREAU OF DRUGS                 |             |              |              |

N 4

PLANT



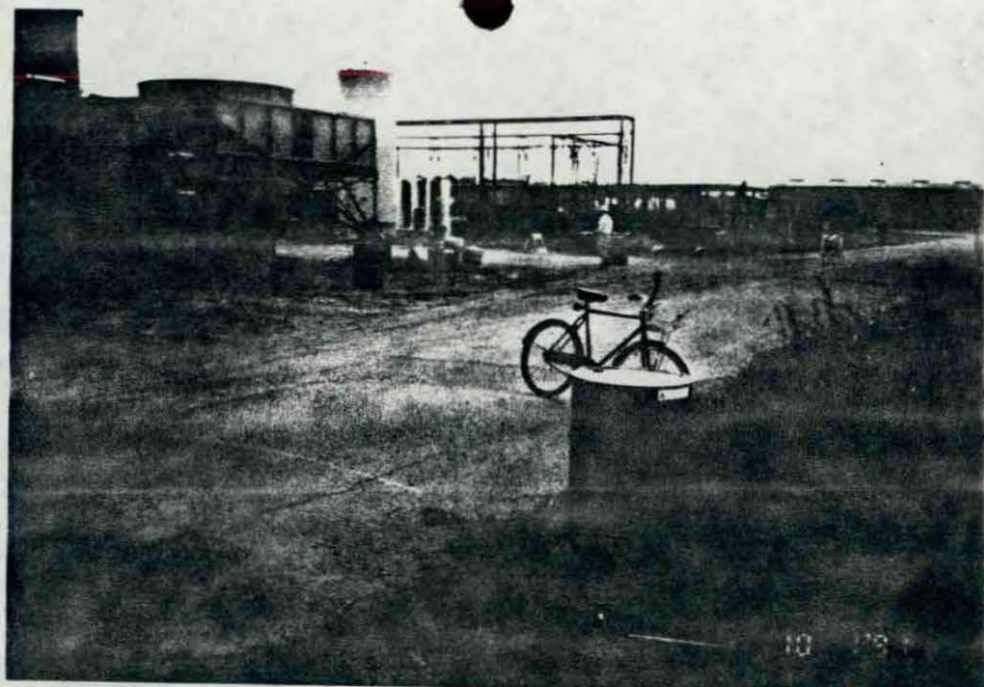
10' X 10' MATRIX



OFFICIAL PHOTOGRAPH  
Arkansas Department of Pollution Control & Ecology

SUBJECT: Overview for excavation of drums  
LOCATION: Cedar Chemical

CITY: Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 0950  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jim Fritchett  
WITNESS: John Waggoner  
CAMERA: Canon S. 2.8  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 1 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Overview for excavation of drums  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 0951  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jim Fritchett  
WITNESS: John Waggoner  
CAMERA: Canon S. 2.8  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 2 of 19

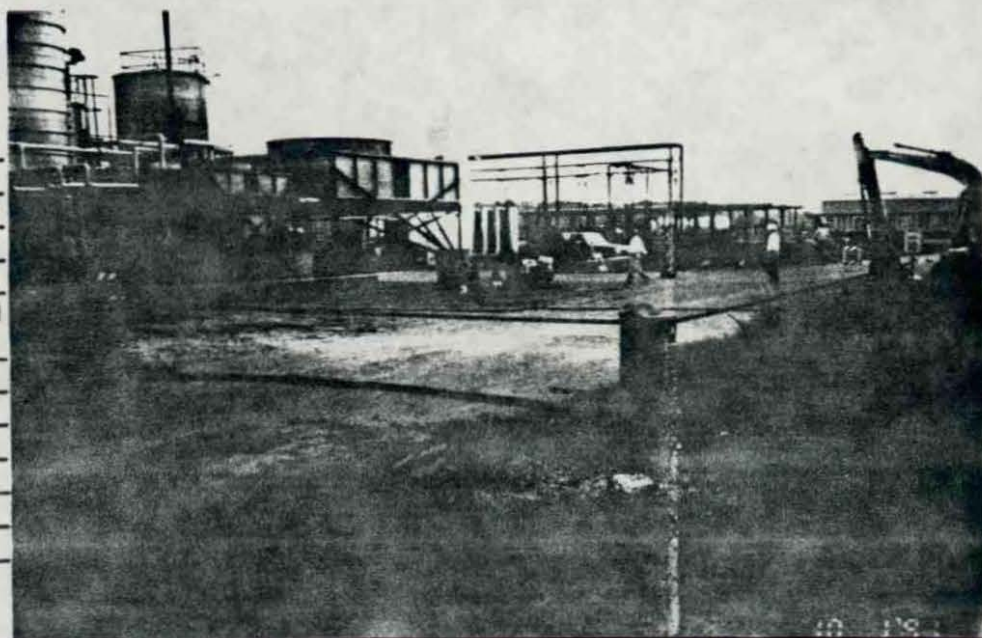


OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Exclusion Zone and Support Zone  
LOCATION: Cedar Chemical

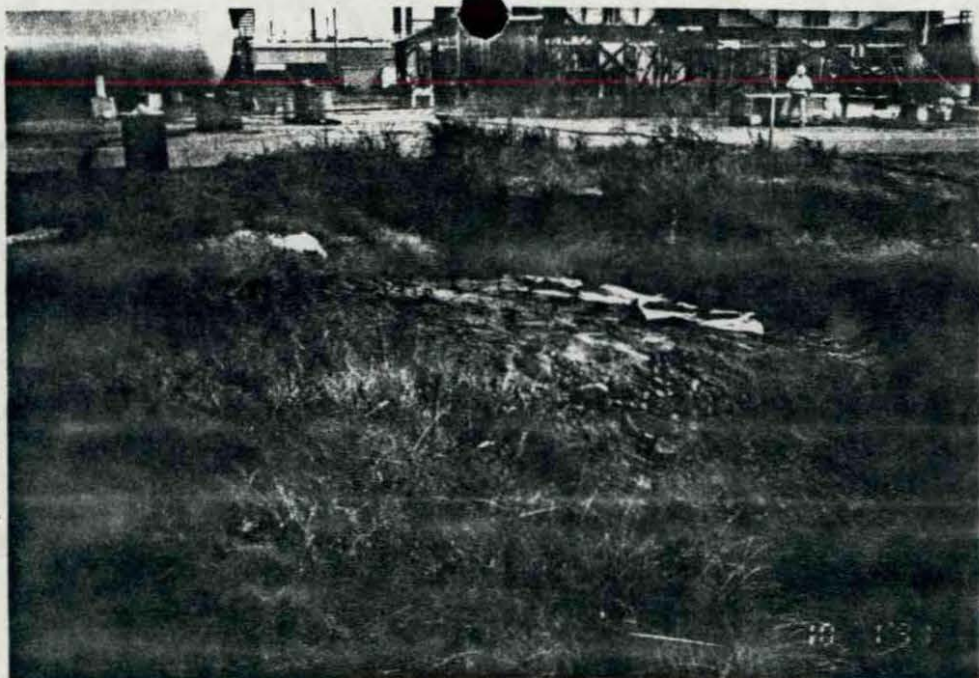
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1109  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jim Fritchett  
WITNESS: John Waggoner  
CAMERA: Canon S. 2.8  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 3 of 19





SUBJECT: Earthen Dam across drainage ditch  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: \_\_\_\_\_ TIME: 1112  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jan F. Smith  
WITNESS: John Wagoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: HW FILE #: \_\_\_\_\_  
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PHOTO #: 4 of 19

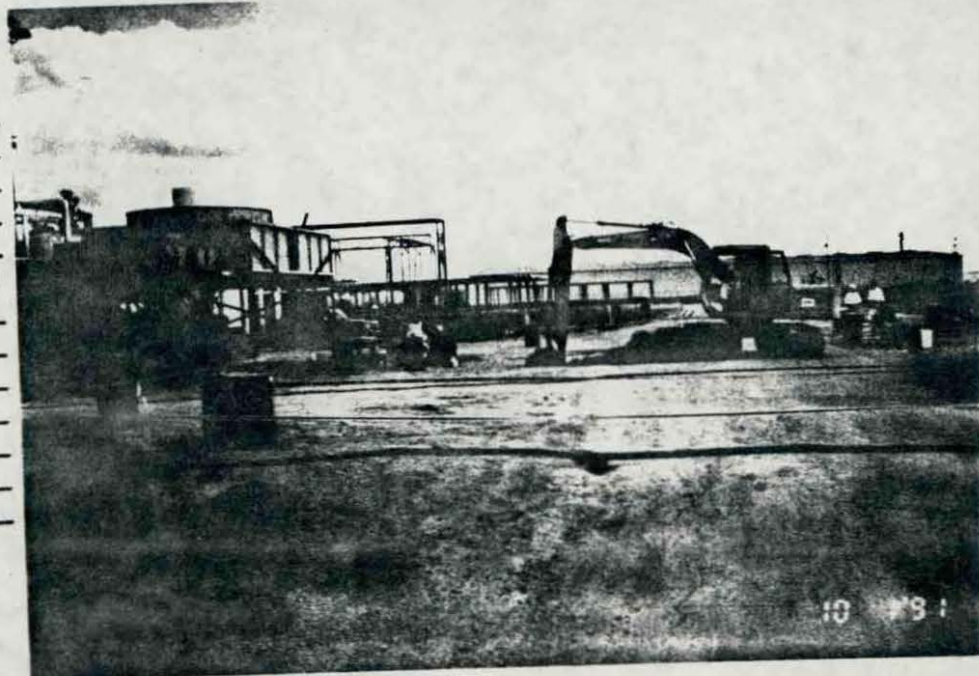


OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
.....

SUBJECT: Examination of excavation facility  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1300  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): \_\_\_\_\_  
WITNESS: \_\_\_\_\_  
CAMERA: \_\_\_\_\_  
FILM TYPE: \_\_\_\_\_ ASA: \_\_\_\_\_ T: 1/ f: \_\_\_\_\_  
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PHOTO #: 5 of 19

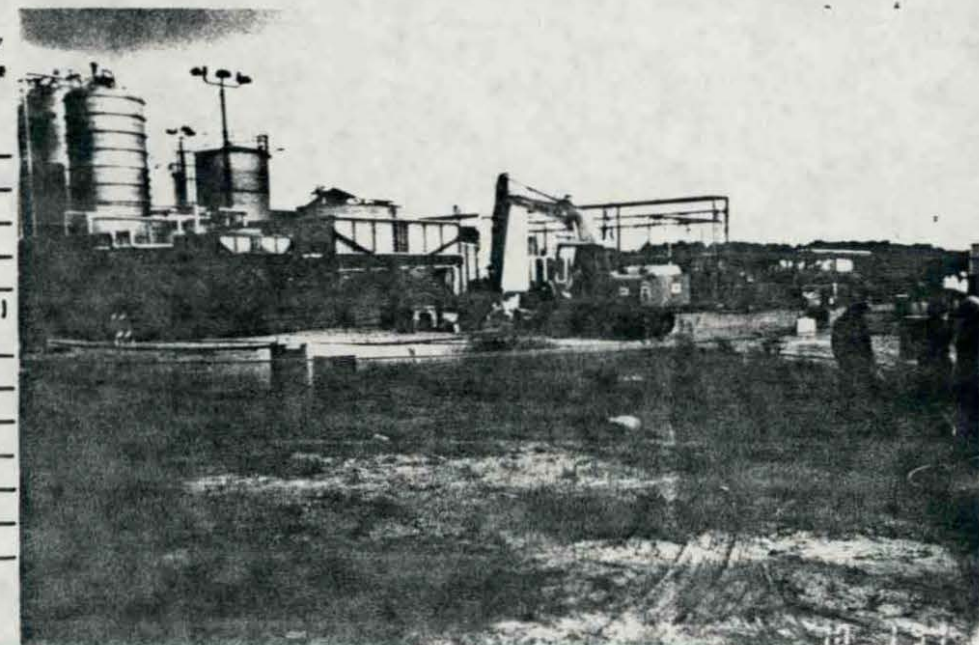


OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
.....

SUBJECT: Same as #5  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1300  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jan F. Smith  
WITNESS: John Wagoner  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: HW FILE #: \_\_\_\_\_  
PROCESSED BY: Wal Mart  
PHOTO #: 6 of 19





OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Test P.T. #2

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1400 hrs

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): John Wright

WITNESS: John Wright

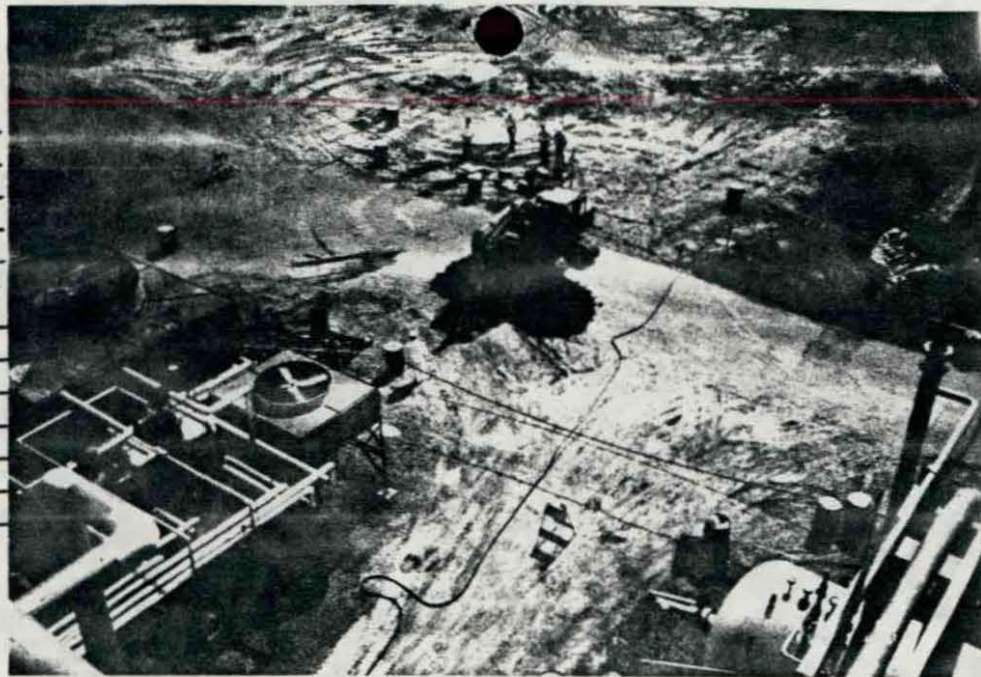
CAMERA: Canon S100

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 7 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Test P.T. #2 PID reading 80 ppm  
LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1430

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): John Wright

WITNESS: John Wright

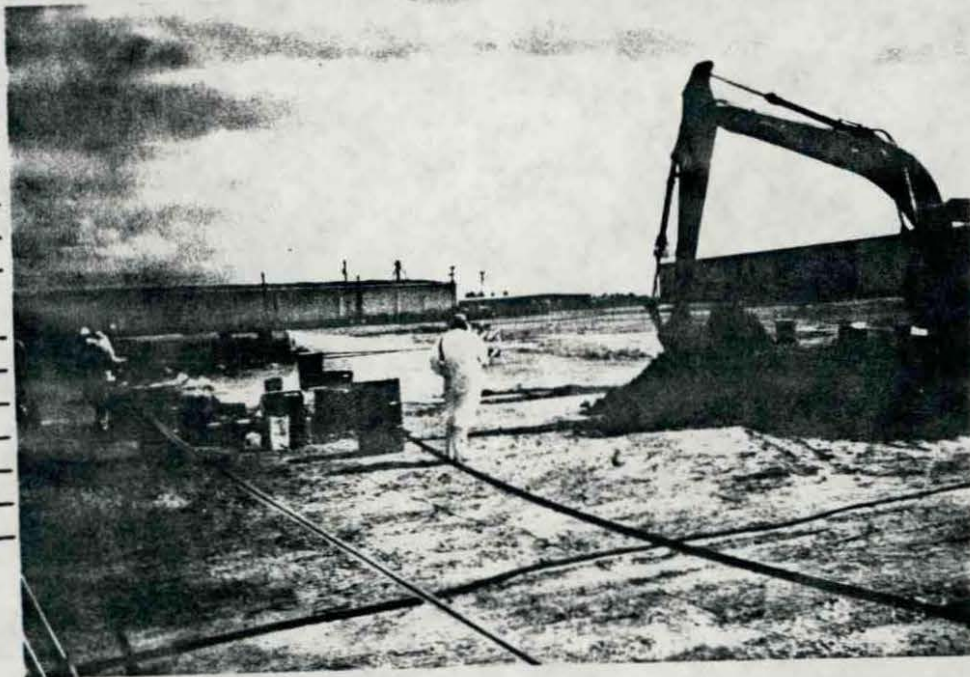
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FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 8 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology

SUBJECT: Test P.T. #2

LOCATION: Cedar Chemical

CITY: W. Helena COUNTY: Phillips STATE: AR

DATE: 10-1-91 TIME: 1430

WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)

PHOTOGRAPHER (Sig.): John Wright

WITNESS: John Wright

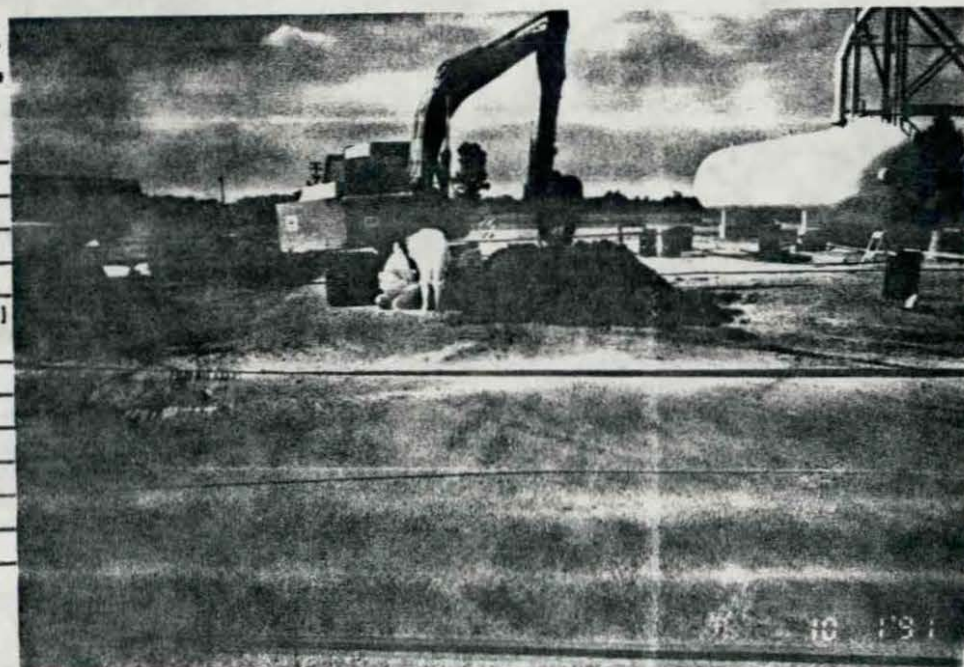
CAMERA: Canon S100

FILM TYPE: 35 ASA: 200 T: 1/ f:

NEGATIVE LOCATION: HW FILE #:

PROCESSED BY: Wal-Mart

PHOTO #: 9 of 19





SUBJECT: Test Pit #2 Overview  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1550  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): John W. Weaver  
 WITNESS: John W. Weaver  
 CAMERA: Canon 5000  
 FILM TYPE: 35 ASA: 200 T: 1/ f:  
 NEGATIVE LOCATION: H-2 FILE #:  
 PROCESSED BY: Wal Mart  
 PHOTO #: 10 of 19

OFFICIAL PHOTOGRAPH

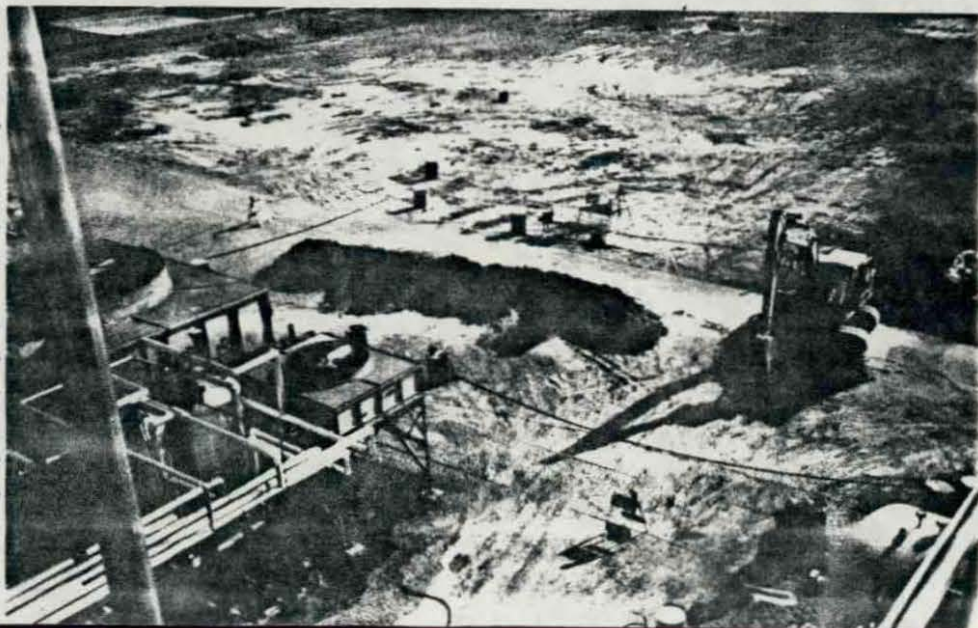
Arkansas Department of Pollution Control & Ecology  
 10-1-91

SUBJECT: Overview of Test Pit #2  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1555  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): John W. Weaver  
 WITNESS: John W. Weaver  
 CAMERA: Canon 5000  
 FILM TYPE: 35 ASA: 200 T: 1/ f:  
 NEGATIVE LOCATION: H-2 FILE #:  
 PROCESSED BY: Wal Mart  
 PHOTO #: 11 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 10-1-91

SUBJECT: Same as #11  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1551  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): John W. Weaver  
 WITNESS: John W. Weaver  
 CAMERA: Canon 5000  
 FILM TYPE: 35 ASA: 200 T: 1/ f:  
 NEGATIVE LOCATION: H-2 FILE #:  
 PROCESSED BY: Wal Mart  
 PHOTO #: 12 of 19





SUBJECT: Test Pit #3 Evaluation  
LOCATION: Cedar Chemical  
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1600  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Jay F. Abbott  
WITNESS: John W. Adams  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: M12 FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 13 of 19

OFFICIAL PHOTOGRAPH

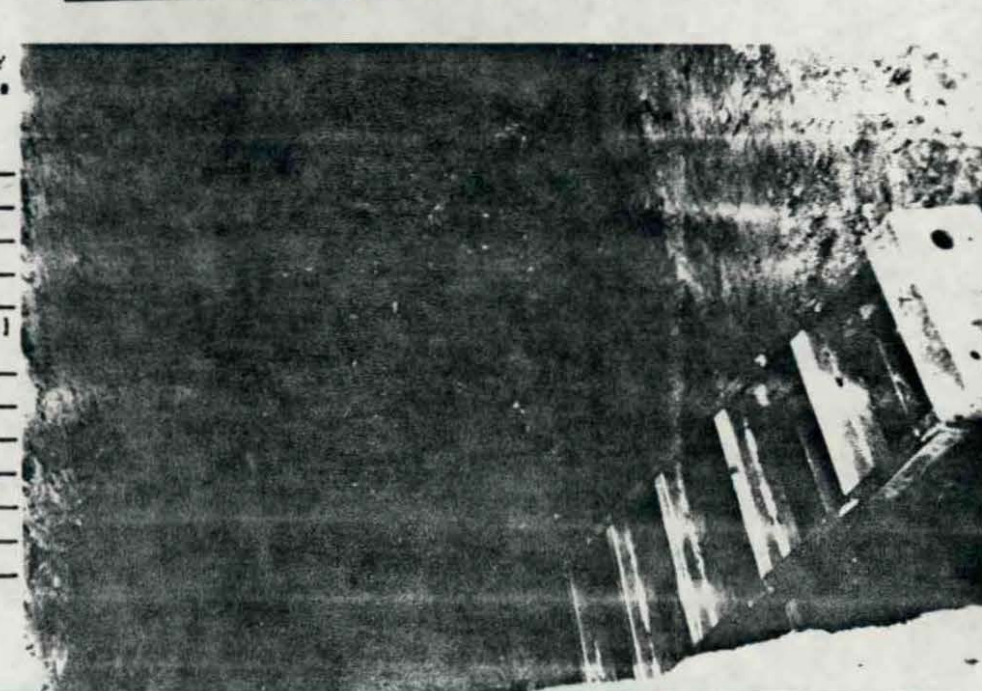
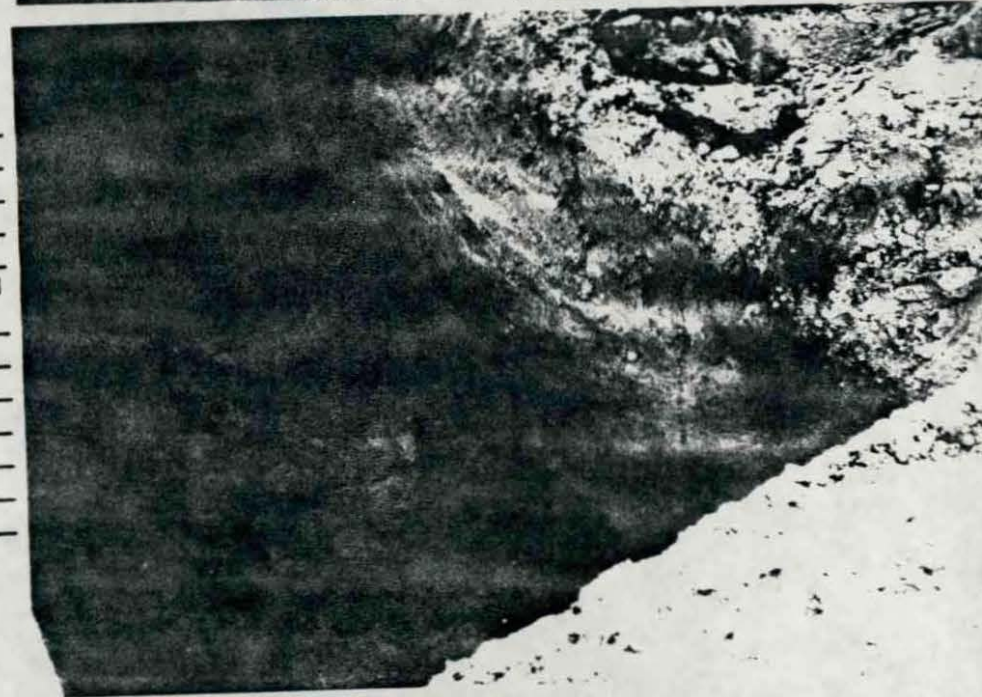
Arkansas Department of Pollution Control & Ecology  
\*\*\*\*\*

SUBJECT: Hot Zone Pit #1  
LOCATION: \_\_\_\_\_  
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1630  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Cleo Dunn (CWM)<sup>SV</sup>  
WITNESS: Jay F. Abbott  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 14 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
\*\*\*\*\*

SUBJECT: Hot Zone Pit #2  
LOCATION: Cedar Chemical  
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1630  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): Cleo Dunn (CWM)<sup>SV</sup>  
WITNESS: Jay F. Abbott  
CAMERA: Canon Sure Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: Wal Mart  
PHOTO #: 15 of 19





Arkansas Department of Pollution Control & Ecology  
 .....

SUBJECT: Hot Zone Pit # 3  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1630  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Cleo Down (CWM)  
 WITNESS: Jay Frichest  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 16 of 19

OFFICIAL PHOTOGRAPH

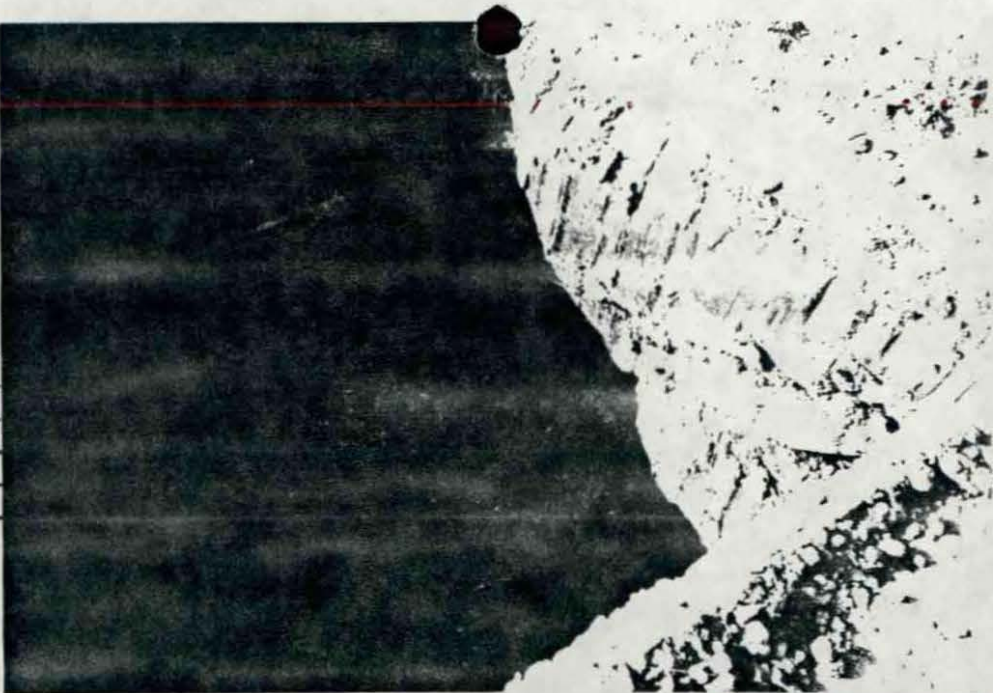
Arkansas Department of Pollution Control & Ecology  
 .....

SUBJECT: Soil Sample Pit #1  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1700  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Jay Frichest  
 WITNESS: Scott Blair (CWM)  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 17 of 19

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 .....

SUBJECT: Soil Sample from Pit #2  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-1-91 TIME: 1730  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): Jay Frichest  
 WITNESS: Scott Blair (CWM)  
 CAMERA: Canon Sure Shot  
 FILM TYPE: 35 ASA: 200 T: 1/ f:   
 NEGATIVE LOCATION: HW FILE #:   
 PROCESSED BY: Wal Mart  
 PHOTO #: 18 of 19





.....  
.....  
SUBJECT: Soil Sample from Pit #3  
LOCATION: Cedar Chemical  
CITY: W. Helena COUNTY: Phillips STATE: AR  
DATE: 10-1-91 TIME: 1815  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.) [Signature]  
WITNESS: Scott Blair (CWN)  
CAMERA: Canon Super Shot  
FILM TYPE: 35 ASA: 200 T: 1/ f:  
NEGATIVE LOCATION: HW FILE #:  
PROCESSED BY: WBI Mart  
PHOTO #: 19 of 19



OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
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SUBJECT: \_\_\_\_\_  
LOCATION: \_\_\_\_\_  
CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ STATE: \_\_\_\_\_  
DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.) \_\_\_\_\_  
WITNESS: \_\_\_\_\_  
CAMERA: \_\_\_\_\_  
FILM TYPE: \_\_\_\_\_ ASA: \_\_\_\_\_ T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: \_\_\_\_\_ FILE #: \_\_\_\_\_  
PROCESSED BY: \_\_\_\_\_  
PHOTO #: \_\_\_\_\_ of \_\_\_\_\_

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
.....

SUBJECT: \_\_\_\_\_  
LOCATION: \_\_\_\_\_  
CITY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ STATE: \_\_\_\_\_  
DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.) \_\_\_\_\_  
WITNESS: \_\_\_\_\_  
CAMERA: \_\_\_\_\_  
FILM TYPE: \_\_\_\_\_ ASA: \_\_\_\_\_ T: 1/ f: \_\_\_\_\_  
NEGATIVE LOCATION: \_\_\_\_\_ FILE #: \_\_\_\_\_  
PROCESSED BY: \_\_\_\_\_  
PHOTO #: \_\_\_\_\_ of \_\_\_\_\_



SUBJECT: Truck to transport contaminated soil  
 LOCATION: Cedar Chemical, near plant  
 OFFICE:  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1030 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Canon Sure Shot (Air Dv)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 1 of 9

OFFICIAL PHOTOGRAPH

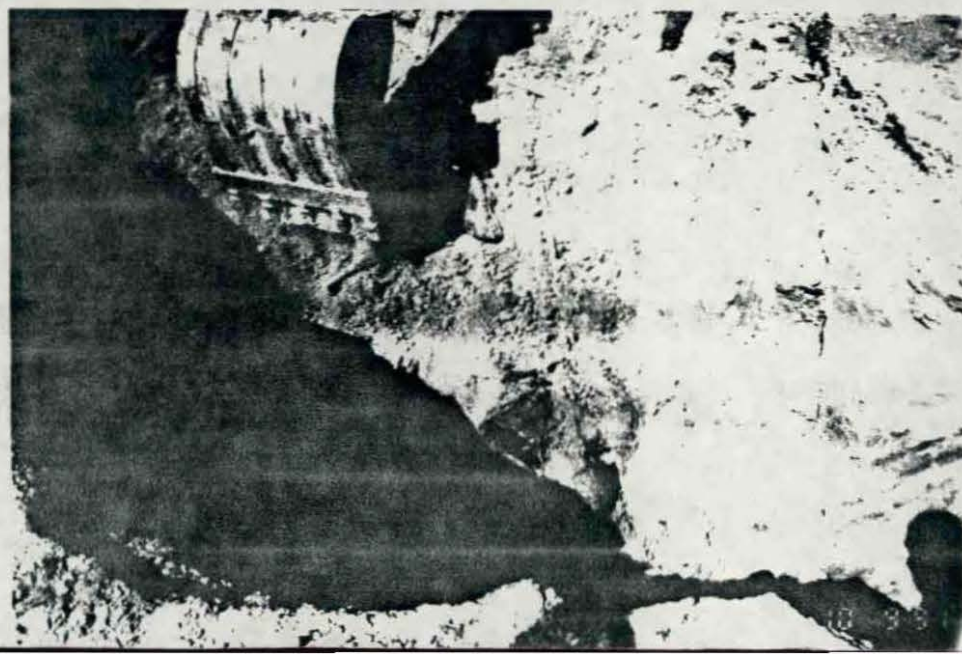
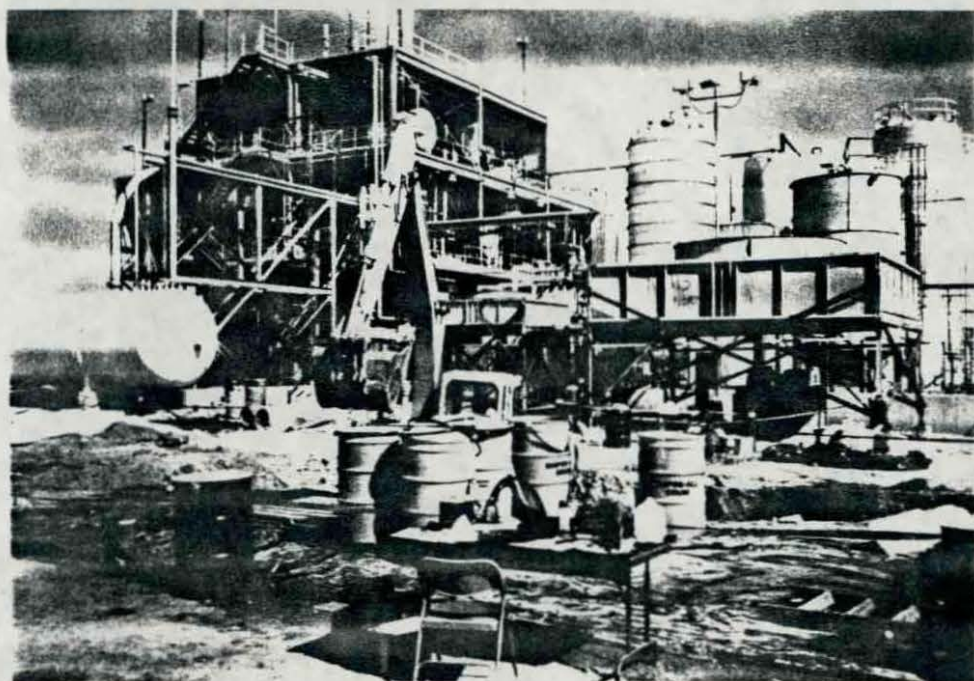
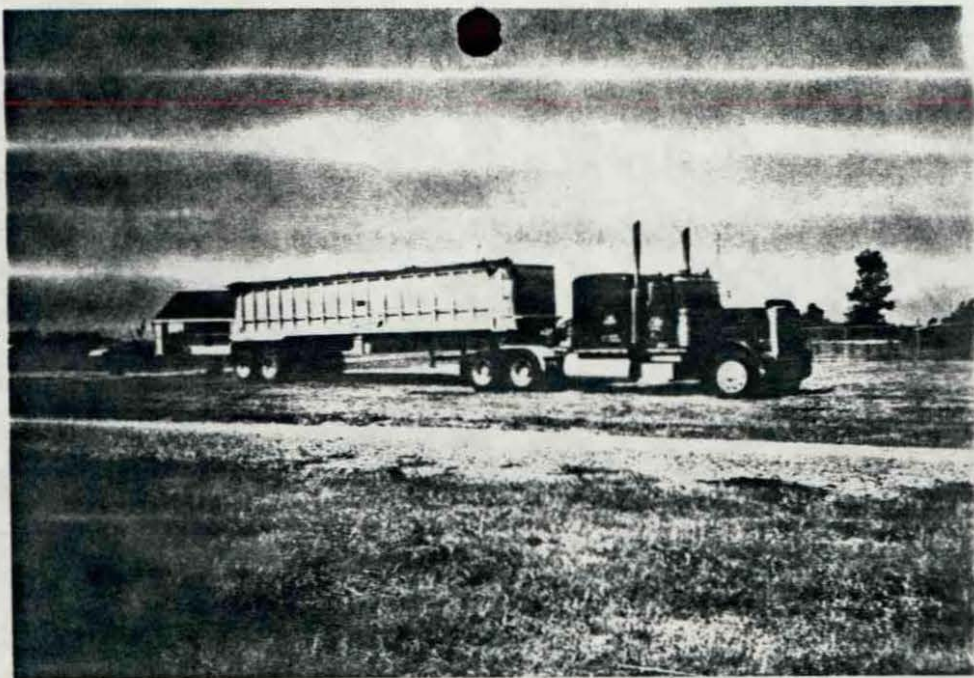
Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*

SUBJECT: Staging area for drums  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1035 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Canon Sure Shot (Air Dv)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 2 of 9

OFFICIAL PHOTOGRAPH

Arkansas Department of Pollution Control & Ecology  
 \*\*\*\*\*

SUBJECT: Pit & old waste drums  
 LOCATION: Cedar Chemical  
 CITY: W. Helena COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1049 AM  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumet  
 WITNESS: Jay Freibolt  
 CAMERA: Canon Sure Shot (Air Dv)  
 FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
 NEGATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-mart  
 PHOTO #: 3 of 9



P 152 AA



SUBJECT: Pt Cold waste drums  
 LOCATION: Cedar Chemical  
 COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1102 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumit  
 GESS: Jay Freibelt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 4 of 9

OFFICIAL PHOTOGRAPH

Kansas Department of Pollution Control & Ecology  
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SUBJECT: Waste drum in Salvage drum  
 LOCATION: Cedar Chemical

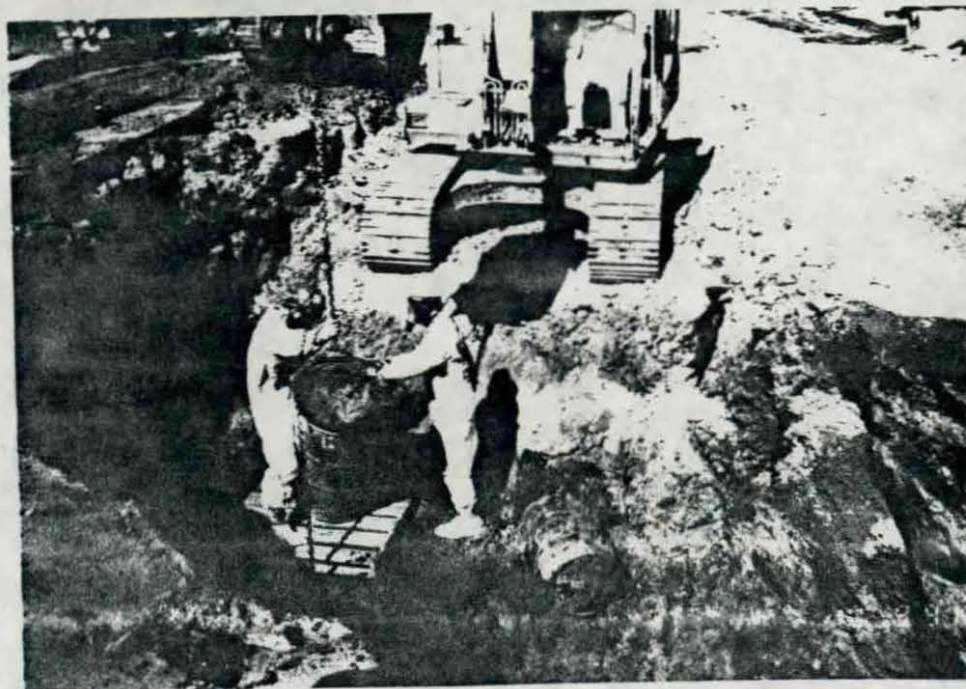
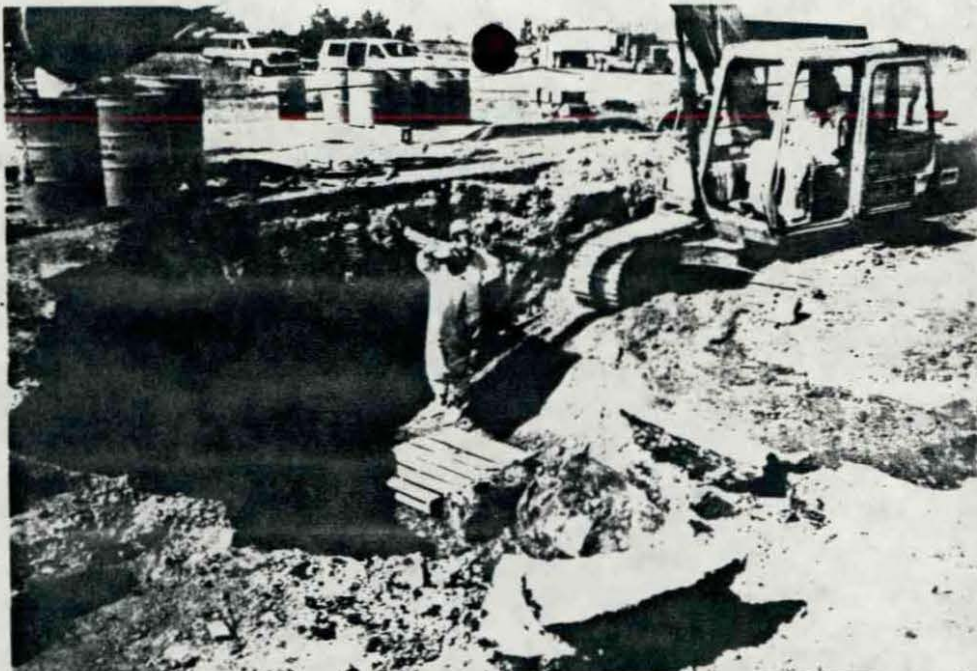
COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1104 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumit  
 GESS: Jay Freibelt  
 CAMERA: Cannon Sure Shot (Air Division)  
 FILM TYPE: 35 ASA: 200 T: 1/ f: -  
 NATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 5 of 9

OFFICIAL PHOTOGRAPH

Kansas Department of Pollution Control & Ecology  
 \*\*\*\*\*

SUBJECT: Waste drums in pit  
 LOCATION: Cedar Chemical

COUNTY: Phillips STATE: AR  
 DATE: 10-9-91 TIME: 1109 Am  
 WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
 PHOTOGRAPHER (Sig.): James Shumit  
 GESS: Jay Freibelt  
 CAMERA: Cannon Sure Shot (Air Div)  
 FILM TYPE: 35 ASA: - T: 1/ f: -  
 NATIVE LOCATION: HW FILE #: -  
 PROCESSED BY: Wal-Mart  
 PHOTO #: 6 of 9





SUBJECT: Waste drum placed in bucket  
LOCATION: Cedar Chemical

DATE: W. Helena COUNTY: Phillips STATE: AR  
TIME: 10-9-91 TIME: 1116 AM  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): James Shurt  
THES: Jay Freibolt  
CAMERA: Cannon Sure Shot (Air D.V.)  
FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
NATIVE LOCATION: HW FILE #: -  
PROCESSED BY: Wal-Mart  
TOTAL #: 7 of 9

OFFICIAL PHOTOGRAPH

Kansas Department of Pollution Control & Ecology  
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SUBJECT: Waste Drum placed in staging area  
LOCATION: Cedar Chemical

DATE: W. Helena COUNTY: Phillips STATE: AR  
TIME: 10-9-91 TIME: 1117 AM  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): James Shurt  
THES: Jay Freibolt  
CAMERA: Cannon Sure Shot (Air D.V.)  
FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
NATIVE LOCATION: HW FILE #: -  
PROCESSED BY: Wal-Mart  
TOTAL #: 8 of 9

OFFICIAL PHOTOGRAPH

Kansas Department of Pollution Control & Ecology  
\*\*\*\*\*

SUBJECT: Waste drums from pit  
LOCATION: Cedar Chemical

DATE: W. Helena COUNTY: Phillips STATE: AR  
TIME: 10-9-91 TIME: 1123 AM  
WEATHER: (SUN) (HAZE) (CLOUDY) (RAIN) (SNOW)  
PHOTOGRAPHER (Sig.): James Shurt  
THES: Jay Freibolt  
CAMERA: Cannon Sure Shot (Air D.V.)  
FILM TYPE: 35 ASA: 200 T: 1/ - f: -  
NATIVE LOCATION: HW FILE #: -  
PROCESSED BY: Wal-Mart  
TOTAL #: 9 of 9





Cedar

TH 20  
OCT 11 1991



**Environmental and Safety Designs, Inc.**

901/372-7962

5724 SUMMER TREES DR. • P.O. BOX 341315 • MEMPHIS, TN 38184-1315

October 9, 1991

Enforcement Branch Manager  
Hazardous Waste Division  
Arkansas Department of Pollution Control and Ecology  
8001 National Drive  
Little Rock, Arkansas 72219

Dear Sir:

Environmental and Safety Designs, Inc. (EnSafe) is pleased to submit the enclosed Facility Investigation Preliminary Report on behalf of the Cedar Chemical Corporation plant in West Helena, Arkansas. This report has been developed in accordance with paragraph 10d of the Consent Administrative Order (CAO) # LIS 91-118. The preliminary report describes the current conditions of the facility as required in Task I of the scope of work attached to the CAO.

The Facility Investigation Workplan, Task II of the scope of work, has been completed and will be delivered following final publication.

If you have any questions concerning this report or the facility investigation workplan please call Mr. John Wagner at the West Helena plant at (501) 572-3701 or me at (901) 372-7962.

Sincerely,

Jeff Bennett  
Environmental Scientist

Enclosure

- cc: Ms. Pat Crossley, ADPC&E  
Mr. John Wagner, Cedar Chemical  
Mr. Allen Malone, Apperson, Crump, Duzane and Maxwell



34  
14 *aw*  
OCT 11 1991

## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

October 4, 1991

Enforcement Branch Manager  
Hazardous Waste Division  
ADPC&E  
8001 National Drive  
Little Rock, AR 72219

Re: Facility Investigation Progress Report - Third Quarter

Dear Sir:

In accordance with Consent Administrative Order LIS 91-118, Task V:B. of the Scope of Work for a Facility Investigation, this initial progress report is submitted for the third quarter of 1991.

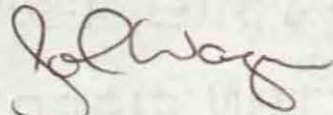
Work proceeded on the preparation of the preliminary report (description of current conditions) and facility investigation workplan (FIWP) referenced in Task V:A. and as described in Tasks I: and II: of the Scope of Work. These documents will be submitted by Cedar's environmental consultant, Environmental & Safety Designs, Inc. of Memphis, Tennessee, on or about October 11, 1991.

ENRAC Division of Chemical Waste Management arrived on site on September 30 to begin the drum removal portion of the Consent Administrative Order.

The third quarter was basically spent on preparations for subsequent work. In the last quarter of 1991, we hope to conclude implementation of the Removal Plan and submit a report in accordance with Paragraph 10(a) and (b) of the CAO. We also expect to discuss any questions ADPC&E has concerning the preliminary report and FIWP, and upon approval by ADPC&E, we expect to begin implementation of the FIWP in accordance with Paragraph 10(e) of the CAO.

Future quarterly progress reports required by the CAO will be submitted within thirty days following the end of each quarter.

Sincerely,



John Wagner

cc: Ms. Pat Crossley  
Mr. Allen T. Malone





STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 NATIONAL DRIVE, P.O. BOX 9583  
LITTLE ROCK, ARKANSAS 72209

FEDERAL E.I.N. 71-0388878

PHONE: (501) 562-7444

INVOICE

CEDAR CHEMICAL CORPORATION  
PO BOX 2648  
W HELENA AR 72390-0000

Primary No. 90-18294

Secondary No. SFF-00998

Date Billed: May 31, 1991

Date Due: July 15, 1991

The Remedial Action Trust Fund Fee (Superfund Fee) is assessed per the Arkansas Hazardous Waste Management Code, Section 23(1)(2). The fee is based on the total amount of hazardous waste generated as reported in the Annual Report. If you have questions concerning this invoice, contact the Hazardous Waste Division at (501) 570-2860.

REPORTED AMOUNT IN LBS: 10941500

ASSESSED FEE: 10000.00

EPA number ARD990660649

Total due this invoice: \$10000.00

**PLEASE:** Make check or money order payable to ADPC&E. Return yellow copy with payment (mark any changes on the yellow copy). Write Primary Invoice Number (shown at right of address box) on your check. Make your check for the amount of this invoice only. DO NOT combine this payment with any other fees or payments due to ADPC&E. Mail to ADPC&E at above address, marked "ATTN: BUSINESS OFFICE".



Terry

## CEDAR CHEMICAL CORPORATION

P.O. Box 2749, Hwy. 242 S. • West Helena, AR 72390  
(501) 572-3701 • Fax No. 501-572-3795

8a  
SEP 03 1991

August 27, 1991

Mr. Mike Bates  
ADPC&E  
Hazardous Waste Division  
P.O. Box 8913  
Little Rock, AR 72219

Re: Waste Drum Removal

Dear Mike:

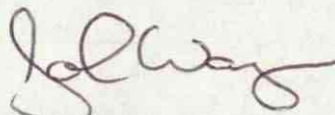
This letter is in response to Consent Administrative Order No. LIS 91-118 dated July 11, 1991.

In accordance with Paragraph 10.a., we hereby notify ADPC&E that the contractor who will implement the "Removal Plan" is Chemical Waste Management, Inc., ENRAC Division - South in Houston, TX.

Drum removal activity will begin September 9, at our facility in West Helena, Arkansas. Enrac's crew will be on site that morning and will begin to remove the overburden later that day. It is anticipated that the first drums will be reached on Tuesday, September 10. Other than the crew's arrival, the times are tentative to the extent that unknown factors may cause delays.

If you have any questions please call me.

Sincerely,



John Wagner



ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

CAO STATUS UPDATE

COMPANY: Cedar Chemical

CSN# 54-0068

LIS NUMBER: 91-118

EFFECTIVE DATE CAO SIGNED: July 11, 1991

**VIOLATIONS**

Statement  
of Purpose

3. a.

| <u>Violation Number</u> | <u>Scheduled date</u> | <u>Completed date</u> | <u>Past due</u> |
|-------------------------|-----------------------|-----------------------|-----------------|
| 001                     | OPEN                  |                       |                 |
| b. 002                  | OPEN                  |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |
|                         |                       |                       |                 |

COMMENTS:

7/26/91 - Put in system. TR



## RCRIS INSPECTION FORM

BRANCH: HW

AGENCY: S

RESP P: I L R

|   |     |              |     |                                     |  |                   |     |          |     |           |  |
|---|-----|--------------|-----|-------------------------------------|--|-------------------|-----|----------|-----|-----------|--|
| HANDLER ID NUMBER   |     | ARD990660649 |     |                                     |  | DATE SUBMITTED    |     | 07/11/91 |     |           |  |
| HANDLER NAME Cedar Chemical   |     |              |     |                                     |  |                   |     |          |     |           |  |
| ADDRESS Hwy 242   |     |              |     |                                     | CITY W. Helena                           |                   |     |          |     |           |  |
| EVALUATION  |     | NEW          |     | <input checked="" type="checkbox"/> |  | UPDATE            |     |          |     |           |  |
| EVAL DATE   |     | SEQ NUM      |     | TYPE                                |  | REAS              |     |          |     |           |  |
| 07/11/91  |     |              |     | OTH                                 |  | 0.2               |     |          |     |           |  |
| AREAS OF EVALUATION   |     |              |     |                                     | EV=EVALUATED DURING INSPECTION OR REVIEW |                   |     |          |     |           |  |
| GGR   | ___ |              |     | DCH                                 | ___                                      | DMR               | ___ |          |     |           |  |
| GLB   | ___ | TGR          | ___ | DCF                                 | ___                                      | DOR               | ___ |          |     |           |  |
| GMR   | ___ | TMR          | ___ | DGS                                 | ___                                      | DOT               | ___ |          |     |           |  |
| GOR   | ___ | TOR          | ___ | DIN                                 | ___                                      | DPB               | ___ | CAS      |     |           |  |
| GPT   | ___ | TRR          | ___ | DLB                                 | ___                                      | DPP               | ___ | FEA      | EV  |           |  |
| GGR   | ___ | TWD          | ___ | DLT                                 | ___                                      | DSI               | ___ |          |     |           |  |
| GSC   | ___ |              |     | DMC                                 | ___                                      | DTR               | ___ | DFR      | ___ |           |  |
| GSQ   | ___ |              |     | DWP                                 | ___                                      | DTT               | ___ | DGW      | ___ |           |  |
| COMMENTS: -Cedar came forward to work out a Removal Plan<br>of drums on-site with ADPC+E. |     |              |     |                                     |  |                   |     |          |     |           |  |
| PENDING VIOLATIONS: ___ (YES/NO)  |     |              |     |                                     | DATE DETERMINED: ___                     |                   |     |          |     |           |  |
| SEQ NUM   |     | AREA         |     | CLASS                               |  | HPV               |     | REG TYPE |     | REG QUOTE |  |
| 1   |     | FEA          |     | 1                                   |  | 9                 |     |          |     |           |  |
| ACTION DATE   |     | ACTION TYPE  |     | SCHEDULED COMPL DATE                |  | ACTUAL COMPL DATE |     |          |     |           |  |
| 07/11/91  |     | 310          |     | 02/11/92                            |  |                   |     |          |     |           |  |
| PENDING VIOLATIONS: ___ (YES/NO)  |     |              |     |                                     | DATE DETERMINED: ___                     |                   |     |          |     |           |  |
| SEQ NUM   |     | AREA         |     | CLASS                               |  | HPV               |     | REG TYPE |     | REG QUOTE |  |
|   |     |              |     |                                     |  |                   |     |          |     |           |  |
| ACTION DATE   |     | ACTION TYPE  |     | SCHEDULED COMPL DATE                |  | ACTUAL COMPL DATE |     |          |     |           |  |
|   |     |              |     |                                     |  |                   |     |          |     |           |  |



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



June 13, 1991

Allen T. Malone  
Apperson, Crump, Duzane and Maxwell  
Suite 2110, One Commerce Square  
Memphis, TN 38103

CSN: 540068 PERMIT NO. ....  
MEDIA: AIR, WATER, SOIL, HAZARDOUS  
SORT: PERMIT, COMPLIANCE  
FEES:

RE: Cedar Chemical, West Helena

Dear Mr. Malone:

Enclosed is an updated scope of work document to be included with the proposed Consent Administrative Order (CAO) for Cedar Chemical. This document, along with the revisions to the CAO, discussed in our meeting of June 11, 1991, should resolve most if not all issues.

I look forward to receiving the final draft of the CAO. Thank you for your patience in this matter.

Sincerely,

Mike Bates

cc: Terry Rice

Enclosure



Exhibit A

Facility Investigation (FI)

Corrective Measure Study (CMS)

Scope of Work

SCOPE OF WORK FOR A FACILITY INVESTIGATION (FI)  
AT

PURPOSE

The purpose of this Facility Investigation is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and to gather all necessary data to support the Corrective Measures Study. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the remedial investigation at the site.

SCOPE

The Facility Investigation consists of five tasks:

Task I: Description of Current Conditions

- A. Facility Background
- B. Nature and Extent of Contamination

Task II: FI Workplan Requirements

- A. Data Collection Quality Assurance Plan
- B. Data Management Plan
- C. Health and Safety Plan
- D. Community Relations Plan

Task III: Facility Investigation

- A. Environmental Setting
- B. Source Characterization
- C. Contaminations Characterization
- D. Potential Receptor Identification

Task IV: Investigation Analysis

- A. Data Analysis
- B. Protection Standards

Task V: Reports

- A. Preliminary and Workplan
- B. Progress
- C. Draft and Final

Task I: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to the ADPC&E for approval, a report providing the background information pertinent to the facility, contamination and any type of on-going corrective action as set forth below. Information from existing reports and studies is acceptable for any requirement in this Order as long as the source of this information is documented and it is pertinent and reflective of current conditions, and meets the format for the FI investigations.



A. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

1. Separate maps depicting the following:
  - a. General geographic location;
  - b. Property lines, with the owners of all adjacent property clearly indicated;
  - c. Surface drainage (with a contour interval of five (5) feet and a scale of 1 inch = 100 feet), depicting all wetlands, floodplains, water features, natural drainage patterns and respective drainage areas, manmade drainage pathways (berms, drains, etc.), NPDES outfalls, etc., and a description of all types of containment (natural and manmade).
  - d. All tanks, buildings, utilities, pave areas, easements, right-of-way, and other features;
  - e. All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
  - f. All known past solid or hazardous waste treatment, storage or disposal areas (e.g., tanks, impoundments, landfill, etc.) regardless of whether they were active on November 19, 1980;
  - g. All known past and present product and waste underground tanks or piping;
  - h. Surrounding land uses (residential, commercial, agricultural, recreational); and
  - i. Surrounding water uses (recreational, agricultural, industrial, etc.)
  - j. The location of all production wells, groundwater monitoring wells, and piezometers. These wells shall be clearly labeled and ground and top of casing elevations, construction details, and techniques included (these elevations and details may be included as an attachment).
  - k. Location, date and type of material spilled at the facility site which will reflect the information submitted for number 3 below.

All maps shall be consistent with the requirements set forth in 40 CFR 270.14 and be of sufficient detail and accuracy to locate and report all current and future work performed at the site;

2. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;
3. Approximate dates or periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or federal response units or private parties), including any inspection reports or technical reports generated as a result of the response; and
4. A summary of past environmental permits requested and/or received, any enforcement actions and their subsequent response, including a list of documents and studies submitted.
5. The Respondent shall submit a compilation of all historical groundwater and surface discharge analytical data for the purposes of review by ADPC&E. The Respondent shall submit the required summary within ninety (90) calendar days after the effective date of the order.
6. The Respondent shall document and report on all interim measures which were or are being undertaken at the facility other than those specified in the order. This shall include:
  - a. Objectives of the interim measures: How the measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long term solution at the facility;
  - b. Design, construction, operation, and maintenance requirements;
  - c. Schedules for design, construction and monitoring; and
  - d. Schedules for progress reports.
7. The Respondent must provide a reference of all environmental permits, applied for and/or received, the purpose of the permit, and a short summary of the requirements.
8. The Respondent shall submit analytical results for all Appendix IX constituents and water wells for all existing groundwater monitoring wells..

B. Nature and Extent of Contamination

The Respondent's report shall include a description of the existing information on the nature and extent of contamination. The Respondent's report will include a description of the existing information.



1. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following.
  - a. Location of unit/area (which shall be depicted on a facility map);
  - b. Quantities of solid and hazardous wastes;
  - c. Hazardous waste or constituents, to the extent known; and
  - d. Identification of areas where additional information is necessary.
2. The Respondent shall prepare a preliminary assessment and description of the existing degree and extent of contamination. This should include:
  - a. Available monitoring data and qualitative information on locations and levels of contamination at the facility;
  - b. All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
  - c. The potential impact(s) on human health and the environment, including demography, groundwater and surface-water use, and land use.

#### TASK II: FIWP REQUIREMENTS

The Respondent shall prepare a Facility Investigation Workplan (FIWP). This FI Workplan shall include the development of several plans, which shall be prepared concurrently. During the Facility Investigation, it may be necessary to revise the FIWP to increase or decrease the detail of information collected to accommodate the facility specific situation. The FIWP shall include the following:

##### A. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed at the facility during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented.

##### 1. Data Collection Strategy

The strategy section of the Data Collection Quality Assurance Plan shall include but not be limited to the following:

- a. Description of the intended uses for the data, and the necessary level of prevision and accuracy for these intended uses;
- b. Description of methods and procedures to be used to assess the revision, accuracy and completeness of the measurement data;

## 2. Sampling and Field Measurements

The Sampling Field Measurements Section of the Data Collection Quality Assurance Plan shall at least discuss:

- a. Selecting appropriate sampling and field measurements locations, depths, etc.;
- b. Providing a statistically sufficient number of sampling and field measurement sites;
- c. Determining conditions under which sampling or field measurements should be conducted;
- d. Determining which parameters are to be measured and where;
- e. Selecting the frequency of sampling and length of sampling period;
- f. Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- g. Measures to be taken to prevent contamination of sampling or field measurements equipment and cross contamination between sampling points;
- h. Documenting field sampling operations and procedures;
- i. Selecting appropriate sample containers;
- j. Sample preservation; and
- k. Chain-of-custody.

## 3. Sample Analysis

- a. Chain-of-custody procedures;
- b. Sample storage procedures and holding times;
- c. Sample preparation methods;
- d. Analytical procedures;
- e. Calibration procedures and frequency;



- f. Data reduction, validation and reporting; and
- g. Internal quality control checks, laboratory performance and systems audits and frequency.

B. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation, such as:

- 1. Data Record
- 2. Tabular Displays
- 3. Graphical Displays

C. Health and Safety Plan

The Respondent shall prepare a facility Health and Safety Plan.

- 1. Major elements of the Health and Safety Plan shall include;
  - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
  - b. Describe the known hazardous and evaluate the risks associated with the incident and with each activity conducted;
  - c. List key personnel and alternates responsible for site safety, responses operations, and for protection of public health;
  - d. Delineate work area;
  - e. Describe levels of protection to be worn by personnel in work area;
  - f. Establish procedures to control site access;
  - g. Describe decontamination procedures for personnel and equipment;
  - h. Establish procedures to control site access;
  - i. Describe decontamination procedures for personnel and equipment;
  - j. Establish site emergency procedures;
  - k. Address emergency medical care for injuries and toxicological problems;

1. Describe requirements for an environmental surveillance program;
  - m. Specify any routine and special training required for responders; and
  - n. Establish procedures for protecting worker from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
    - a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
    - b. EPA Order 1440.1 - Respiratory Protection;
    - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
    - d. Approved Facility Contingency Plan;
    - e. EPA Standard Operating Safety Guide (1984);
    - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
    - g. State and local regulations; and
    - h. Other EPA guidance as provided.

D. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

E. Project Management Plan

The Permit shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and key project personnel. The Project Management Plan will also include a description of qualifications of key project personnel performing or directing the FI, including contractor personnel. This plan shall also document management approach to the Facility Investigation.

TASK III: FACILITY INVESTIGATION

The Respondent shall conduct those investigations of SWMUs previously identified with known or suspected releases of contamination as necessary to protect human health and the environment to: characterize the facility (Environmental Setting); define the source (Source Characterization); and identify actual or potential receptors.

Investigations should result in data of adequate technical quality to support the development and evaluation of the corrective measure alternative or alternatives during the Corrective Measures Study, when necessary.



The facility investigation activities shall when conducted follow the plans set forth in Task II. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan. All sampling locations shall be documented in a log and identified on a detailed site map. Information from existing reports and studies is acceptable for any requirement in the order as long as the source of this information is documented and it is pertinent and reflective of current conditions, and meets the format for the RFI investigations.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the facility;
- b. An analysis of any topographic features that might influence the groundwater flow system. (Note; Stereographic analysis of aerial photographs may aid in this analysis).
- c. Based on field data, tests, (gamma and neutron logging of existing and new wells, piezometers and borings) and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units).
- d. Based on field studies and cores, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
  - i. Unconsolidated sand and gravel deposits
  - ii. Zones of fracturing or channeling in consolidated or unconsolidated deposits;
  - iii. Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant sources, a representative description of water level or fluid pressure monitoring.

- f. A description of manmade influences that may affect the hydrogeology of the site.

2. Soils

The Respondent shall conduct a program to characterize the soils and rock units above the water table in the vicinity of the contaminant release(s). Such characterization shall include, but not be limited to, the following information:

- a. Surface soil distribution;
- b. Soil profile, including ASTM classification of soils;
- c. Transects of soil stratigraphy;
- d. Saturated hydraulic conductivity;
- e. Porosity;
- f. Cation exchange capacity (CEC);
- g. Soil organic content;
- h. Soil pH;
- i. Particle size distribution;
- j. Depth of water table;
- k. Moisture content;
- l. Effect of stratification on unsaturated flow;
- m. Infiltration;
- n. Evapotranspiration;
- o. Residual concentration of contaminants in soil; and
- p. Mineral and metal content.

B. Source Characterization

The Respondent shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, including: type; quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e.g., facility security, and engineered barriers). This shall include quantification of the following specific characteristics, at each source area:

- 1. Unit/Disposal Area characteristics:
  - a. Location of unit/disposal area;



- b. Type of unit/disposal area;
- c. Design features;
- d. Operating practices (past and present);
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and
- h. Method used to close the unit/disposal area.

2. Waste Characteristics:

- a. Type of waste placed in the unit;
- b. Physical and chemical characteristics;
- c. Migration and dispersal characteristics of the waste;

The Respondent shall document the procedures used in making above determinations.

C. Contamination Characteristics

The Respondent shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination when necessary to characterize contamination from a SWMU. This data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identify of the individual(s) performing the sampling and analysis. The Respondent shall address the following types of contamination at the facility:

1. Groundwater Contamination

The Respondent shall conduct a Groundwater Investigation to characterize any plumes of contamination at the facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of any Appendix IX constituents in the plume(s);

- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation to characterize the contamination of the soil and rock units above the water table in the vicinity of the contaminant release. The investigation shall include the following information:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contaminant movement; and
- e. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations.

3. Surface Water Contamination

The Respondent shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from contaminant releases at the facility. The investigation shall include the following:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plumes originating from the facility, and the extent of contamination in the underlying sediments;
- b. The horizontal and vertical direction and velocity of contaminant movement;
- c. An evaluation of the physical, biological, and chemical factors influencing contaminant movement;
- d. An extrapolation of future contaminant movement; and
- e. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.



The Respondent shall document the procedures used in making the above determinations.

4. Air Contamination

The Respondent shall conduct an investigation to characterize the particulate and gaseous contaminants released into the atmosphere. This investigation shall provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of the release; and
- c. The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

5. Subsurface Gas

The Respondent shall provide information characterizing the nature, rate and extent of releases of reactive gases from the units. Such information shall include, but not be limited to: provisions for monitoring subsurface gases released from the unit; and an assessment of the potential for these releases to have a threat to human health and environment.

The Respondent shall document the procedures used in making the above determination.

D. Potential Receptors

The Respondent shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems (e.g., stressed vegetation) may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of ground water:
  - a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and
  - b. Location of all ground water wells, names of current owners or tenants at those locations, and the current use of these wells within a one mile radius of the facility.
2. Local uses and possible future uses of surface waters within a 1.5-mile radius of the facility:
  - a. Domestic and municipal (e.g., potable and lawn/gardening watering);

- b. Recreational (e.g., swimming, fishing);
  - c. Agricultural;
  - d. Industrial; and
  - e. Environmental (e.g., fish and wildlife propagation).
3. Human use of or access to the facility and adjacent lands, including but not limited to:
- a. Recreation;
  - b. Hunting;
  - c. Residential;
  - d. Commercial;
  - e. Zoning; and
  - f. Relationship between population locations and prevailing wind direction.
4. A description of the biota in surface water bodies on, adjacent to, or affected by the facility.
5. A description of the ecology overlying and adjacent to the facility.
6. A demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age, sex; and sensitive subgroups.
7. A description of any endangered or threatened species near the facility.

#### TASK IV: INVESTIGATIVE ANALYSIS

The Respondent shall prepare an analysis and summary of all facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support the Corrective Measures Study, if one is required.

The Respondent shall analyze all facility investigation data outlined in Task II and prepare a report on the type and extent of contamination at the facility including sources and migration pathways. The report shall describe the contamination (qualitative/quantitative) in relation to the background levels indicative for the area.



For solid waste management units the Respondent shall provide information to support the ADPC&E selection/development of Ground Water Protection Standards for all of the Appendix IX constituents found in the ground water during the Facility Investigation (Task III), or other investigations required by the order.

The Respondent shall identify all relevant and applicable standards for the protection of human health and the environment (e.g., National Ambient Air Quality Standards, Federally-approved State water quality standards, ground water protection standards, etc.).

The Respondent shall identify any corrective measure which may be applicable to the site. This identification of preliminary corrective measure technologies shall be based on the analysis of all facility investigation data developed in Task II and other reports prepared pursuant to this Task IV.

#### TASK V: REPORTS

##### A. Preliminary and Workplan

The Respondent shall submit to ADPC&E the Preliminary Report (Task I) and the Facility Investigation Workplan (Task II) as described in the Order.

##### B. Progress

The Respondent shall at a minimum provide the ADPC&E with signed, quarterly progress reports containing:

1. A description and estimate of the percentage of the FI completed;
2. Summaries of all findings to date;
3. Summaries of all changes made in the FI during the reporting period;
4. Summaries of all contacts relating to environmental matters with representatives of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period; and
8. Projected work for the next reporting period.

##### C. Draft and Final

The FI Report shall be developed in draft form for the ADPC&E's review. The FI Report shall be developed in final format incorporating comments received on the Drafted FI Report.

Three (3) copies of all reports, including the Task I report, Task II workplan and both the Draft and Final FI Reports (Task III-IV) shall be

provided by the Respondent. One of the copies provided should be on a formatted computer disc.

Facility Submission Summary

A summary of the information reporting requirements contained in the Facility Investigation Scope of Work is presented below:

| Facility Submission  | Due Date*                       |
|--|---------------------------------|
| Description of Current Situation (Task I)                    | 90 days;                        |
| FI Workplan (Task II)  | 90 days;                        |
| Draft FI Report (Task III and IV)                            | 60 days after<br>completing FI; |
| Progress Reports on Task I through V and<br>interim measures | Quarterly                       |

\* All due dates are calculated from the effective date of the Order unless otherwise specified.



SCOPE OF WORK FOR A CORRECTIVE MEASURES STUDY (CMS)  
AT

PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate the corrective action alternative or alternatives and to recommend the corrective measures to be taken at the site. The Respondent will furnish the personnel, materials, and services necessary to prepare the CMS, except as otherwise specified.

If the Respondent believes that certain requirements of the scope of work are not applicable, the specific requirements shall be identified and a detailed rationale for inapplicability shall be provided.

SCOPE

The Corrective Measure Study consists of four tasks:

Task VI: Identification and Development of the Corrective Measure Alternative or Alternatives

- A. Description of Current Situation
- B. Establishment of Corrective Action Objectives
- C. Laboratory and Bench-Scale Study
- D. Screening of Corrective Measures Technologies
- E. Identification of the Corrective Measure Alternative or Alternatives

Task VII: Evaluation of the Corrective Measure Alternative(s)

- A. Technical/Environmental/Human Health/Institutional
- B. Cost Estimate

Task VIII: Justification and Recommendation of the Corrective Measure or Measures

- A. Technical
- B. Human Health
- C. Environmental

Task IX: Reports

- A. Progress
- B. Draft
- C. Final

TASK VI: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVE OR ALTERNATIVES

Based on the results of the Facility Investigation (FI) and consideration of the identified Preliminary Corrective Measure Technologies (Task I) the Respondent shall identify, screen, and develop the alternative(s) for removal,

containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

The Respondent shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the FI report. The Respondent shall provide an update to information presented in Task I of the FI to ADPC&E regarding previous response activities and any interim measures which have or are being implemented at the facility. The Respondent shall also make a facility-specific statement of the purpose for the response, based on the results of the FI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

The Respondent, in conjunction with ADPC&E shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the Facility Investigation, EPA guidance and the requirements of any applicable Federal or Arkansas statutes. At a minimum, all corrective actions concerning groundwater releases from solid waste management units must be consistent with, and as stringent as, those required under 40 CFR 264.100.

C. Laboratory and Bench-Scale Study

When a new technology is being proposed or similar waste streams have not routinely been treated or disposed using the technology the Respondent shall conduct laboratory and/or bench-scale studies to determine the applicability of a corrective measure technology or technologies to the facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

The Respondent shall develop a testing plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Respondent shall prepare a report summarizing the testing program and its results, both positive and negative.

D. Screening of Corrective Measure Technologies

The Respondent shall review the results of the FI and reassess the technologies which are applicable to the facility. The Respondent shall screen the preliminary corrective measure technologies identified in Task IV of the FI and any supplement technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to



perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations. Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations

The level of technology development, performance record, and inherent construction, operation and maintenance problems shall be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

E. Identification of the Corrective Measure Alternatives

The Respondent shall develop the corrective measure alternatives based on the corrective measure objectives and analysis of Preliminary Corrective Measure Technologies, as presented in Task IV of the FI as supplemented following the preparation of the FI report. The Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the site. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of options that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task IV, as supplemented in the development of the alternative.

TASK VII: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE OR ALTERNATIVES

The Respondent shall describe each corrective measure alternative that passed the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical,



environmental, human health and institutional concerns. The Respondent shall also develop cost estimates for each corrective measure.

A. Technical/Environmental/Human Health/Institution

The Respondent shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Respondent shall evaluate each alternative in the four following areas:

1. Technical

The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

a. The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:

i. Effectiveness shall be evaluated in terms of the ability to perform intended functions such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

ii. Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

b. The Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:

i. Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The



availability of labor and materials to meet these requirements shall also be considered; and

- ii. Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- c. The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the total time required to achieve a given level of response:
  - i. Constructability is determined by conditions both internal and external to the facility conditions and includes such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). The Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities;
  - ii. Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.
- d. The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider include fire, explosion, and exposure to hazardous substances.

## 2. Environmental

The Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, and evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse impacts.



3. Human Health

The Respondent shall assess each alternative in terms of the extent which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or regulations acceptable to ADPC&E.

4. Institutional

The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. Cost Estimate

The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include capital, and operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (non-construction and overhead) costs.

a. Direct capital costs include:

- i. Construction costs: Cost of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure alternative.
- ii. Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is completed;
- iii. Land and site development costs: Expenses associated with purchase of land and development of existing property; and
- iv. Building and services costs: Costs of process and non-process buildings, utility connections, purchased services, and disposal costs.



b. Indirect capital costs include:

- i. Engineering expenses: Costs of administration, design construction supervision, drafting, and testing of corrective measure alternatives;
- ii. Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
- iii. Start-up and shakedown costs: Costs incurred during corrective measure start-up; and
- iv. Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Respondent shall consider the following operation and maintenance cost components:

- a. Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operation;
- b. Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
- c. Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
- d. Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
- e. Disposal and treatment: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues generated during operation;
- f. Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
- g. Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;



- h. Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- i. Other costs: Items that do not fit any of the above categories.

**TASK VIII. JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES**

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Trade offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The ADPC&E will select the corrective measure alternative or alternatives to be implemented based on the results of Tasks VIII and IX. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

**A. Technical**

- 1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- 2. Reliability - corrective measure or measures which do not require frequency or complex operation and maintenance activities and have provided effective under waste and facility conditions similar to those anticipated will be given preference;
- 3. Implementability - corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- 4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

**B. Human Health**

The corrective measure or measures must comply with existing U.S. EPA and/or ADPC&E criteria, standards, or regulations for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

**C. Environmental**

The corrective measure or measures posing the least adverse impact (or greatest improvement) on the environment over the shortest period of time will be favored.



## TASK IX: REPORTS

The Respondent shall prepare a Corrective Measure Study Report presenting the results of Tasks VII through IX recommending a corrective measure alternatives. Three (3) copies of the draft and final reports shall be provided to the ADPC&E by the Respondent. One of the copies provided shall be on a formatted computer disc.

### A. Progress

The Respondent shall at a minimum provide the ADPC&E with signed quarterly progress reports containing:

1. A description and estimate of the percentage of the CMS completed;
2. Summaries of all findings;
3. Summaries of all changes made in the CMS during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
5. Actions being taken to rectify problems;
6. Changes in personnel during the reporting period;
7. Projected work for the next reporting period; and
8. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

### B. Draft

The Report shall at a minimum include:

1. A summary of the corrective measure or measures and rationale
  - a. Description of the corrective measure or measures and rationale for selection;
  - b. Performance expectations;
  - c. Preliminary design criteria and rationale;
  - d. General operation and maintenance requirements;
  - e. Long-term monitoring requirements
2. Design and Implementation Precautions:
  - a. Special technical problems;
  - b. Additional engineering data required;

- c. Permits and regulatory requirements;
  - d. Access, easements, right-of-way;
  - e. Health and safety requirements; and
  - f. Community relations activities.
3. Costs Estimates and Schedules
- a. Capital cost estimate;
  - b. Operation and maintenance costs estimate; and
  - c. Project schedule (design, construction, operation).

C. Final

The Respondent shall finalize the Corrective Measure Study Report incorporating comments received from the ADPC&E on the Draft Corrective Measure Study Report.





STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



June 6, 1991

CSN: 540068 PERMIT NO. ....  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE  
FEES:

Mr. Allen T. Malone  
Apperson, Crump, Duzane and Maxwell  
Suite 2110, One Commerce Square  
Memphis, TN 38103

RE: Proposed Consent Administrative Order - Cedar Chemical

Dear Mr. Malone:

Enclosed is a draft copy of the referenced Consent Administrative Order (CAO). This draft is based on our review of the initial draft submitted by Cedar Chemical and subsequent meeting with representatives from Cedar and you.

A tentative meeting has been set for 1:00 p.m., June 11, 1991, to continue discussions on this matter. If more time is needed to review the enclosed draft, please let me know.

Sincerely,

Mike Bates  
Chief  
Hazardous Waste Division

MB/ckh:LTR130

Enclosure

cc: Terry Rice

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

IN THE MATTER OF:

CEDAR CHEMICAL CORPORATION  
WEST HELENA, ARKANSAS  
ARD990660649

NO. LIS 91-

CONSENT ADMINISTRATIVE ORDER

JURISDICTION

1. This Consent Administrative Order is issued pursuant to the authority of the Arkansas Remedial Action Trust Fund Action ("ARATFA"), A.C.A. §8-7-501 et seq., as currently amended; the Arkansas Hazardous Waste Management Act ("AHWMA"), A.C.A. §8-7-201 et seq.; and the Arkansas Hazardous Waste Management Code (the "Code"). All terms contained within this document shall have the definitions as found in the above-referenced laws, unless the context plainly indicates otherwise.
2. The issues herein have been settled by the agreement of Cedar Chemical Corporation (the "Respondent") and the Director of the Arkansas Department of Pollution Control and Ecology ("ADPC&E") without prejudice to the right of Respondent to contest the findings of fact or conclusions of law or determinations made herein, subject to the Respondent's agreement not to contest ADPC&E's subject matter jurisdiction with respect to the Consent Administrative Order, and without prejudice to Respondent's right to seek contribution from other liable parties pursuant to ARATFA, A.C.A. §8-7-520.

STATEMENT OF PURPOSE

3. By entering into this Consent Administrative Order, the mutual objectives of ADPC&E and the Respondent are:
  - a. To remove buried drums discovered by the Respondent on its chemical manufacturing plant located on a 48-acre site on Highway 242 in West Helena, Arkansas (hereinafter the "Site") and to carry out a closure of said burial area in accordance with a Removal Work Plan dated June 1990, heretofore submitted by Respondent to and approved by, ADPC&E; and
  - b. To prepare and submit to ADPC&E a preliminary report describing the current conditions at the site. Also, develop and implement a facility investigation work plan including reports of investigation analysis, laboratory and bench scale studies and periodic progress reports, all in accordance with the Scope of Work Document for Facility Investigation (the "Scope of Work") attached hereto as Exhibit A. The ultimate purpose of the tasks described in the Scope of Work is to determine the nature and extent of contamination on the Site and to determine the potential for the release or threat of release of any hazardous substances from the Site so that if deemed necessary by ADPC&E, appropriate remedial alternatives can be developed and implemented.



#### PARTIES

4. This Consent Administrative Order shall be binding upon ADPC&E and upon the Respondent named herein and any subsequent respondent who shall become signatory hereto, their successors and assigns, and shall control the work of all persons, agents, contractors and technical consultants acting under or for ADPC&E or the Respondent in carrying out the actions required by this Consent Administrative Order.
5. Respondent shall provide a copy of this Consent Administrative Order to each contractor, subcontractor, laboratory and technical consultant retained by it to conduct any portion of the work performed pursuant to this Consent Administrative Order prior to said contractor's, subcontractor's, laboratory's or consultant's initiation of work conducted under this Consent Administrative Order.
6. Any contract entered into by the Respondent for the purpose of carrying out any actions required by this Consent Administrative Order shall incorporate the requirements of this Consent Administrative Order pertaining to the work to be performed or services or materials to be supplied.

#### FINDINGS OF FACT

7. Based on available information regarding the Site, including the investigations and reports heretofore carried out and submitted by Respondent to ADPC&E pursuant to the requirements of a Consent Administrative Order heretofore entered into between the Respondent and ADPC&E in LIS 86-027 (the "Previous CAO") (ADPC&E having specifically found that the Respondent has fully complied with the provisions of the Previous CAO), ADPC&E makes the following findings of fact:
  - a. The Respondent is a Delaware corporation duly qualified to do business in the State of Arkansas. The Respondent assumed management responsibility for the control of the Site on December 16, 1985, and acquired ownership of the Site thereafter on February 28, 1986.
  - b. From the early 1970's until Cedar assumed control and ownership of the Site in 1985, the Site was owned and/or operated by a succession of other companies.
  - c. The Site consists of 48 acres located in the Helena-West Helena Industrial Park located on Highway 242 south of West Helena, Arkansas. Active operations are carried out on about twenty acres on the Site.
  - d. The first manufacturing unit on the Site was constructed by a former owner in 1970 for the production of propanil, a rice herbicide. Subsequent manufacturing units were constructed and operated by former owners for the production of dinoseb, and other agricultural and industrial chemicals.
  - e. Currently, Respondent uses the Site to manufacture propanil, which it markets under its own labels, and for the manufacture of various other agricultural and industrial products which Respondent produces



under toll manufacturing contracts with its customers. There is presently under construction a facility on the Site where Respondent intends to produce dichloroaniline beginning in 1991. A new office administrative building was recently constructed on the Site as well. Respondent currently employs approximately 125 persons at the Site.

- f. Data and reports submitted by Respondent pursuant to the groundwater monitoring plan implemented in accordance with the Previous CAO have raised areas of concern which ADPC&E deems to merit additional investigation to determine the source and extent of contamination of groundwater on the Site for the purpose of developing any appropriate remedial alternative deemed necessary.
- g. In addition, in the course of constructing stormwater drainage line in the spring of 1990, employees of Respondent discovered a drum burial area on the Site believed to have been installed by a former operator of the site. The extent of the burial area was delineated and characterized in accordance with a site characterization report heretofore submitted by Respondent to ADPC&E. Thereafter, a Removal Plan dated June 1990 (the "Removal Plan") was submitted by the Respondent to, and approved by, ADPC&E.

#### CONCLUSIONS OF LAW

- 8. Based upon the foregoing findings of fact, the Director, ADPC&E makes the following conclusions of law which are neither an admission by, binding upon or conclusive as to the Respondent except as provided herein:
  - a. Respondent is a "person liable for the site" as that term is used in A.C.A. §8-7-508.
  - b. The Site as described herein is a "hazardous substance site" as that term is used in A.C.A. §8-7-503.

#### DETERMINATIONS

- 9. Based upon the foregoing findings of fact and conclusions of law, the Director, ADPC&E, has determined that:
  - a. There is a threat of release of a hazardous substance at and/or from the Site.
  - b. It is necessary that the drums located in the drum burial area identified in the Removal Plan referred to in Paragraph 7.G. be removed from the Site and properly disposed of in a manner consistent with the Removal Plan referred to hereinabove, and that Respondent expand the investigation of the nature and extent of contamination of soils and groundwater at the Site which it initiated in accordance with the Previous CAO.
  - c. The actions agreed upon under the terms of this Consent Administrative Order are in the public interest, are consistent with the National Oil and Hazardous Substances Contingency Plan, 40 CFR Part 300, and are necessary to protect the public, health, welfare and the environment.



ORDER

10. IT IS THEREFORE AGREED AND ORDERED by consent of Respondent and ADPC&E, as follows:

Interim Measures

- a. As an interim measure to achieve the purposes of this Consent Administrative Order, the Respondent shall, not later than sixty (60) days following the effective date of this Consent Administrative Order, retain a qualified contractor or contractors and implement the Removal Plan referred to in Paragraph 7.G. hereof for the purpose of removing and properly disposing of the buried drums previously discovered on the Site, as aforesaid, and closing the said burial area in accordance with the aforesaid Removal Plan. Respondent shall cause the Removal Plan to be implemented beginning no later than ninety (90) days following the effective date hereof. The Respondent shall cause ADPC&E to be notified at least five (5) days prior to initiation of the drum removal activities hereunder.
- b. Within sixty (60) days after completion of the Removal Plan, the Respondent shall submit to ADPC&E a detailed written report describing the activities undertaken to complete the Removal Plan, including all necessary and appropriate certifications and supporting information which is reasonably necessary for ADPC&E to evaluate and approve such report.
- c. If at any time during the removal plan implementation or the facility investigation a substantial threat to human health or the environment is discovered additional interim measures by the Respondent may be necessary. Such interim measures will be taken at the direction of ADPC&E for the purpose of alleviating imminent threats to human health or the environment.

FACILITY INVESTIGATION

- d. Within ninety (90) days following the execution of this Consent Administrative Order, the Respondent shall submit a comprehensive facility investigation workplan. The facility investigation shall be designed to determine the nature and extent of releases of hazardous substances from regulated units, solid waste management units, and other source areas at the facility. In addition, the facility investigation shall collect all of the necessary data to develop a remedial action alternatives report.

The facility investigation shall consist of the following tasks:

- (1). Description of Current Conditions
  - (a). Facility Background
  - (b). Nature and Extent of Contamination

- (2). FI Workplan Requirements
  - (a). Data Collection Quality Assurance Plan
  - (b). Data Management Plan
  - (c). Health and Safety Plan
  - (d). Community Relations Plan
- (3). Facility Investigation
  - (a). Environmental Setting
  - (b). Source Characterization
  - (c). Contaminations Characterization
  - (d). Potential Receptor Identification
- (4). Investigation Analysis
  - (a). Data Analysis
  - (b). Protection Standards
- (5). Identification and Development of the Corrective Measure Alternative or Alternatives
  - (a). Description of Current Situation
  - (b). Establishment of Corrective Action Objectives
  - (c). Laboratory and Bench-Scale Study
  - (d). Screening of Corrective Measures Technologies
  - (e). Identification of the Corrective Measure Alternative or Alternatives.
- (6). Evaluation of the Corrective Measure Alternative(s)
  - (a). Technical/Environmental/Human Health/Institutional
  - (b). Cost Estimate
- (7). Justification and Recommendation of the Corrective Measure or Measures
  - (a). Technical
  - (b). Human Health
  - (c). Environmental
- (8). Reports
  - (a). Preliminary and Workplan
  - (b). Progress
  - (c). Draft and Final
- e. The FIWP shall be submitted within ninety (90) days of execution of the Consent Administrative Order and shall include a complete schedule of work which shall be strictly adhered to by the Respondent.



- f. Upon ADPC&E review and approval of the FIWP, such approved FIWP will become part of this Consent Administrative Order and shall be implemented by the Respondent in the manner and in accordance with the schedule contained in the FIWP.
- g. Upon ADPC&E approval of all work to be completed under the facility investigation and approval of the final report, ADPC&E will select a corrective measure alternative(s) following public notice and opportunity for comment.
- h. Respondent shall begin implementation of the corrective measure(s) selected pursuant to paragraph G. (above) within sixty (60) days of notice from ADPC&E of the selected corrective measure(s).
- i. ADPC&E and the Respondent recognize that circumstances may arise for which there are no provisions in the facility investigation work plan. Such circumstances may make necessary deviation from the approved plans. ADPC&E and the Respondent agree to negotiate in such instances to resolve any matters that may arise.
- j. ADPC&E shall use its best effort to review all submittals made by the Respondent within thirty (30) days of receipt and shall notify the Respondent by the 30th day of approval or disapproval of the submittal or its need for additional review time. In the event of disapproval of any submittal, ADPC&E shall simultaneously, specify in writing the reasonable basis for such disapproval and, if additional investigation or other work is required, a reasonable time schedule for completion. The Respondent shall undertake such additional activities or otherwise respond as required by this paragraph and, if appropriate, shall submit a revised report within any reasonable time specified by ADPC&E.
- k. ADPC&E and the Respondent hereby designate respective Project Coordinators who shall be responsible for overseeing the implementation of this Consent Administrative Order. To the maximum extent possible, communications between the Respondent and ADPC&E that concern technical issues and/or matters shall be directed through the Project Coordinator. The Respondent and ADPC&E may change their respective Project Coordinator(s) by notifying the other party in writing.

The initial Project Coordinators shall be:

For ADPC&E:

Enforcement Branch Manager  
Hazardous Waste Division  
ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 National Dr.  
Little Rock, AR 72219

cc: Ms. Pat Crossley  
ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 National Dr.  
Little Rock, AR 72219



For Respondent:

The Respondents' Coordinator shall have the authority to make or authorize minor field modifications in the Facility Investigation Work Plan or in techniques, procedures or designs used to carry out the Facility Investigation Work Plan which are necessary to the completion of this project.

1. All correspondence, reports, plans and other writings required under the terms of this Consent Administrative Order to ADPC&E shall be sent to the following:

Enforcement Branch Manager  
Hazardous Waste Division  
ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 National Dr.  
Little Rock, AR 72219

cc: Ms. Pat Crossley  
ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY  
8001 National Dr.  
Little Rock, AR 72219

All correspondence, reports, work plans and other writings required under the terms of this Consent Administrative Order to Respondent shall be sent to the following:

- m. Either party may designate additional representatives for purposes of receiving such notices.

#### TRADE SECRETS

11. The terms and provisions of this Consent Administrative Order shall not be interpreted or construed as a waiver of any rights which Respondent may have to restrict access to trade secrets for which a valid claim has been submitted and approved under the provisions of Section 6 of the Arkansas Hazardous Waste Management Code.

#### ACCESS TO THE SITE

12. During the term of this Consent Administrative Order, ADPC&E and its employees, contractors, and duly authorized representatives shall be granted access to the Site at reasonable times. Nothing in this Consent Administrative Order shall be construed as restricting the inspection or access authority of ADPC&E under applicable state law.



#### APPLICABLE LAW

13. All actions required to be taken pursuant to this Consent Administrative Order shall be undertaken in accordance with the requirements of all applicable, relevant and appropriate local, Arkansas and federal laws and regulations.

#### RECORD PRESERVATION

14. The Respondent shall preserve during the term of this Consent Administrative Order and for a minimum of seven (7) years thereafter all records and documents in its possession or in the possession of its divisions, employees, agents, accountants or contractors which relate in any way to the Site or work performed pursuant to this Consent Administrative Order, notwithstanding any document retention policy to the contrary.

#### RESOLUTION OF DISPUTES

15. As to any submittal plan, report or schedule required hereunder, for which ADPC&E has provided the Respondent a notice of disapproval, Respondent shall either, within such reasonable time period as is provided by ADPC&E for response to such notice of disapproval, modify and resubmit to ADPC&E such submittal, or alternatively, Respondent shall notify ADPC&E of its disagreement with such disapproval whereupon the parties shall use their best efforts to resolve all disputes or differences of opinion informally and in good faith. If such disagreement cannot be resolved informally, the Respondent shall be entitled to invoke dispute resolution provision contained hereinbelow.
16. If the Respondent disagrees in whole or in part with any decision or directive of ADPC&E, the Respondent shall promptly notify ADPC&E in writing of its objections and each ground therefore. Such notice shall set forth the specific points in dispute. The position that the Respondent asserts should be adopted as consistent with the requirements of this Consent Administrative Order, the grounds for the Respondent's position and any other facts which it desires ADPC&E to consider.
17. The parties shall have a period of thirty (30) calendar days after ADPC&E's receipt of the Respondent's written objections to attempt to resolve the dispute. If agreement is reached, the resolution shall be reduced to writing, signed by the representatives of each settling party and incorporated herein by reference.
18. If the parties are unable to reach an agreement within thirty (30) calendar days after ADPC&E's receipt of Respondent's written objections, ADPC&E, acting through its project coordinator, shall provide to Respondent within thirty (30) calendar days its written decision on the dispute. ADPC&E's project coordinator's decision shall control unless the Respondent files a petition for resolution of the dispute with the Director of ADPC&E within fifteen (15) days of receipt of the ADPC&E project coordinator's decision. If such a petition is filed, the dispute shall be resolved by a proceeding before an Administrative Law Judge in accordance with the applicable Arkansas law.



#### SUBSEQUENT MODIFICATION OR AMENDMENT

19. This Consent Administrative Order may be amended or modified in any respect, including the addition of one or more additional respondents, by mutual agreement of ADPC&E and the Respondent. Such amendments or modifications shall be in writing and shall have as their effective date the date on which such amendments or modifications are assigned by ADPC&E and the Respondent.

#### RESERVATION OF RIGHTS

20. Nothing in this Consent Administrative Order shall constitute or be construed as a release by ADPC&E or Respondent of any claim, cause of action or demand in law or equity against any party not a signatory to this document for any liability relating to the Site arising out of the generation, storage, treatment, handling, transportation, release or disposal of any hazardous substances, pollutants or contaminants.

#### DELAY IN PERFORMANCE

21. If any event occurs which causes delay in the performance of the tasks required by this Consent Administrative Order, the Respondent shall have the burden of demonstrating that the delay was caused by circumstances beyond its control. The Respondent shall promptly notify ADPC&E orally and within seven (7) calendar days following oral notification to ADPC&E, notify ADPC&E in writing of any event or circumstance which it reasonably believes will delay its performance hereunder, including the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay and the time table by which the Respondent intends to implement such measures. Any delay in performance occasioned by such events or circumstances beyond Respondent's reasonable control shall extend deadlines hereunder which are affected thereby for so long as such event or circumstance continues to prevent the Respondent's performance.

#### CONTRIBUTION PROTECTION

22. The parties represent and agree that this Consent Administrative Order was negotiated in good faith. The Respondent, solely for the purpose of complying with this Consent Administrative Order, as it may be amended by mutual agreement, intends to assume responsibility for work exceeding the Respondent's equitable share. To that extent, the Respondent intends to seek contribution from responsible parties not entering into this consent Administrative Order pursuant to ARATFA §8-7-520 or other applicable law. The parties agree that such right of contribution is an important aspect of this Consent Administrative Order.

#### COVENANT NOT TO SUE

23. Except as otherwise reserved herein, upon termination of this Consent Administrative Order, the ADPC&E covenants not to bring any civil, judicial or administrative action under any federal or state statute or the common law against the Respondent for any claim or cause of action arising from or related to the activities which are the subject of this Order.



EFFECTIVE DATE

24. This Consent Administrative Order shall become effective upon Respondent's receipt of a fully executed copy thereof.

IT IS SO AGREED AND ORDERED.

DATE: \_\_\_\_\_ CEDAR CHEMICAL CORPORATION

By: \_\_\_\_\_  
RESPONDENT

DATE: \_\_\_\_\_  
DIRECTOR, ARKANSAS DEPARTMENT OF  
POLLUTION CONTROL AND ECOLOGY



Environmental and Safety Designs, Inc.

**Jeff Bennett**  
*Environmental Scientist*

P.O. Box 341315 • MEMPHIS, TN 38184 • (901) 372-7962  
FAX (901) 372-2454



CHEMICAL CORPORATION  
WEST HELENA PLANT

**Elgene "Gene" Pearce**  
OPERATIONS MANAGER

P.O. BOX 2749  
HWY. 242 S.  
WEST HELENA, AR 72390

BUS: (501) 572-3701  
FAX: (501) 572-3795



Cedar Chemical

3/26/91

CMS + Alan Malone

- o Incorporate <sup>CMS</sup> CM selection + CMI into this order as well
- o ? appropriateness of ~~ago~~ naming only Angus as previous o/o (legal)
- o How to handle Fin. Assurance - applicability in Order
  - ? audited fin. statements on other forms
- o 1.7 - strike - Removal Plan heading
  - PC+E to draft "c" - re: IM contingency
- o Dispute Resolution - Run thru Legal

Find "Clean" copy of  
Corrective Action Outline

MAY 06 1991

STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913

LITTLE ROCK, ARKANSAS 72219-8913

PHONE: (501) 562-7444

FAX: (501) 562-4632

April 29, 1991

CSN. 54-0068  
PERMIT NO #.....  
HAZARDOUS WASTE - SORT:  
PERMIT/COMPLIANCE/SUPERFUNDS

Mr. Joe Porter  
Environmental Engineer  
Cedar Chemical Corporation  
P. O. Box 2749  
West Helena, AR 72390

Dear Mr. Porter:

This Department has received the 1990 Hazardous Waste Annual Report for Cedar Chemical Corporation, ARD990660649.

Form IC, Part II, Section H, lists the total generation as 10,852,400 pounds, with the same amount shipped off-site, and no carry-over from 1989. Form GS lists the total shipments off-site as 11,030,600 pounds. Please provide the actual generation and shipment amounts for this report.

This information must be provided to this Department within ten (10) working days of receipt of this letter.

If you have any questions, please call me at (501) 570-2867.

Sincerely,

*Vicky Renfrow*  
Vicky Renfrow  
Program Coordinator  
Hazardous Waste Division

cc: Tom Ezell, Manager, Programs Branch, ADPCE

5-2-91

We transposed 2 numbers

Corrected forms attached

*Porter*



FORM IC: IDENTIFICATION AND CERTIFICATION

PART I

THIS FORM MUST BE COMPLETED BY ALL GENERATORS AND TSD FACILITIES

THIS SITE GENERATES LESS THAN 220 POUNDS OF HAZARDOUS WASTE PER  
CALENDAR MONTH, AND IS CONDITIONALLY EXEMPT.

Section I:

A. Site name

Cedar Chemical Corporation

B. EPA identification number

ARD 990 660 649

C. Physical location address

Hwy 242 South at Industrial Park

D. City

West Helena

E. County

Phillips

F. State

Arkansas

G. Zip code

72390

Section II:

A. ☐ Mark here if mailing address is same as physical address.

B. Mailing address

P.O. Box 2749

C. City

West Helena

D. State

Arkansas

E. Zip code

72390

Section III:

Print Company contact:

A. Last name

Porter

First name

Joe E.

B. Title

Environmental Engineer

C. Telephone

501-572-3701

Section IV:

Print Standard Industrial Classification Code:

1. 2 8 6 9

3. \_ \_ \_ \_

5. \_ \_ \_ \_

2. 2 8 7 9

4. \_ \_ \_ \_

6. \_ \_ \_ \_

Note: the SIC code is a four digit number. Your company may have more than one SIC code. A list of SIC codes and definitions is included in this booklet.

FORM IC: IDENTIFICATION AND CERTIFICATION

PART II

A. Name change:

previous name: \_\_\_\_\_

new name: \_\_\_\_\_

B. Ownership change: \_\_\_\_\_

C. Date facility closed: \_\_\_\_\_

D. Waste stream change: \_\_\_\_\_

E. Process change: \_\_\_\_\_

F. Generation status of this site for this reporting year:

☒ Category 1 (generated 2200 pounds or more per calendar month)

☐ Category 2 (generated between 220 pounds and 2200 pounds per calendar month)

☐ Category 3 (generated less than 220 pounds per calendar month)

G. Was hazardous waste generated as a one-time event during the reporting year? (spill cleanup, remedial actions, one-time elimination of on-site waste) List the provisional number used.

☒ No ☐ Yes ARP0600 \_\_\_\_\_

If yes, briefly describe actions taken.

H. List total amount of hazardous waste generated during the reporting year:

|                                   |                       |            |
|-----------------------------------|-----------------------|------------|
| Total generated in reporting year | <del>10,852,400</del> | 10,941,500 |
| Amount shipped off-site           | <del>10,852,400</del> | 10,941,500 |
| Amount of on-site TSD             | -0-                   |            |

5-2-91  
JParker

List total amount of hazardous waste carried over from the previous year that was shipped in the reporting year:

|   |     |                       |
|---|-----|-----------------------|
| Amount carried over                       | -0- | 10,941,500            |
| Amount shipped off-site in reporting year |     | <del>10,852,400</del> |

5-2-91  
JParker



Section V:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. (Print)  
Last name  
Miles

First name  
John H.

Title  
Plant Manager

B. Signature

Date

4/5/91

## Section I: Generator identification

B. Name Cedar Chemical Corporation

Name Union Pacific Railroad

city Deer Park state TX zip 77536

|     |                        |            |
|-----|------------------------|------------|
| TRI | CAS number: 00108-88-3 | 00067-56-1 |
|-----|------------------------|------------|

TRI CAS number:

TRI CAS number:

TRI CAS number:

[illegible]



# FORM GS: GENERATOR ACTIVITY REPORT

## Section I: Generator identification

A. EPA identification number ARD 990 660 649

B. Name Cedar Chemical Corporation

## Section II: Transporter identification

A. EPA identification number OKD 981 605 363

Name Environmental Transportation Service

## Section III: TSD facility identification

A. EPA identification number TXD 000 742 304

Name Gibraltar Chemical Resources

address P.O. Box 248 - Hwy 155

city Winona state TX zip 75792

## Section IV: Waste identification

1. Waste description: Waste, Flammable Liquid, NOS, UN 1993 (RQ Toluene)

TRI Y CAS number: 00108-88-3 00067-56-1

| SIC  | SC  | WFC  | OC | ST   | EPA WC | AMOUNT | UOM    | D |
|------|-----|------|----|------|--------|--------|--------|---|
| 2879 | A37 | B101 | A  | M134 | D001   | 89,100 | Pounds |   |

2. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |

3. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |

4. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |

FORM WM: WASTE MINIMIZATION

  X   NO WASTE MINIMIZATION OCCURRED IN THE REPORTING YEAR  
(if no waste minimization occurred, do not complete this form)

Section I:

A. waste description:

B. EPA waste code

C. state waste code

-----

-----

D. SIC code

E. source code

F. form code

G origin code

-----

A\_ \_

B\_ \_ \_

\_ system type M\_ \_ \_

H. TRI constituent \_\_\_\_\_

I. CAS numbers    1. \_\_\_\_\_    2. \_\_\_\_\_  
                     3. \_\_\_\_\_    4. \_\_\_\_\_  
                     5. \_\_\_\_\_

Section II:

A. quantity generated in previous year \_\_\_\_\_

B. quantity generated in reporting year \_\_\_\_\_

C. UOM \_\_\_\_\_    D. density \_ \_ . \_ \_    (1) lbs/gallon    (2) sg

E. was this waste recycled in reporting year:

  1   yes (continue to BOX F)  
  2   no (skip to Section III)

F. on-site recycling:

quantity recycled on-site in reporting year \_\_\_\_\_

G. off-site recycling:

quantity recycled off-site in reporting year \_\_\_\_\_



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913

LITTLE ROCK, ARKANSAS 72219-8913

PHONE:(501)562-7444

FAX:(501)562-4632

April 29, 1991

Mr. Joe Porter  
Environmental Engineer  
Cedar Chemical Corporation  
P. O. Box 2749  
West Helena, AR 72390

Dear Mr. Porter:

This Department has received the 1990 Hazardous Waste Annual Report for Cedar Chemical Corporation, ARD990660649.

Form IC, Part II, Section H, lists the total generation as 10,852,400 pounds, with the same amount shipped off-site, and no carry-over from 1989. Form GS lists the total shipments off-site as 11,030,600 pounds. Please provide the actual generation and shipment amounts for this report.

This information must be provided to this Department within ten (10) working days of receipt of this letter.

If you have any questions, please call me at (501) 570-2867.

Sincerely,

*Vicky Renfrow*

Vicky Renfrow  
Program Coordinator  
Hazardous Waste Division

cc: Tom Ezell, Manager, Programs Branch, ADPCE

APR 16 1991

FORM IC: IDENTIFICATION AND CERTIFICATION

PART I

THIS FORM MUST BE COMPLETED BY ALL GENERATORS AND TSD FACILITIES

THIS SITE GENERATES LESS THAN 220 POUNDS OF HAZARDOUS WASTE PER CALENDAR MONTH, AND IS CONDITIONALLY EXEMPT.

Section I:

A. Site name

Cedar Chemical Corporation

B. EPA identification number

ARD 990 660 649 ✓

C. Physical location address

Hwy 242 South at Industrial Park

D. City

West Helena

E. County

Phillips

F. State

Arkansas

G. Zip code

72390

Section II:

A. Mark here if mailing address is same as physical address.

B. Mailing address

P.O. Box 2749

C. City

West Helena

D. State

Arkansas

E. Zip code

72390

Section III:

Print Company contact:

A. Last name

Porter

First name

Joe E.

B. Title

Environmental Engineer

C. Telephone

501-572-3701

Section IV:

Print Standard Industrial Classification Code:

1. 2 8 6 9

3. \_ \_ \_ \_

5. \_ \_ \_ \_

2. 2 8 7 9

4. \_ \_ \_ \_

6. \_ \_ \_ \_

Note: the SIC code is a four digit number. Your company may have more than one SIC code. A list of SIC codes and definitions is included in this booklet.



FORM IC: IDENTIFICATION AND CERTIFICATION

PART II

A. Name change:

previous name: \_\_\_\_\_

new name: \_\_\_\_\_

B. Ownership change: \_\_\_\_\_

C. Date facility closed: \_\_\_\_\_

D. Waste stream change: \_\_\_\_\_

E. Process change: \_\_\_\_\_

F. Generation status of this site for this reporting year:

☒ Category 1 (generated 2200 pounds or more per calendar month)

\_\_\_\_ Category 2 (generated between 220 pounds and 2200 pounds per calendar month)

\_\_\_\_ Category 3 (generated less than 220 pounds per calendar month)

G. Was hazardous waste generated as a one-time event during the reporting year? (spill cleanup, remedial actions, one-time elimination of on-site waste) List the provisional number used.

☒ No ☐ Yes ARP0600 \_\_\_\_\_

If yes, briefly describe actions taken.

H. List total amount of hazardous waste generated during the reporting year:

Total generated in reporting year 10,852,400

Amount shipped off-site 10,852,400

Amount of on-site TSD -0-

11,030,600

*see revised report*

List total amount of hazardous waste carried over from the previous year that was shipped in the reporting year:

Amount carried over -0-

Amount shipped off-site in reporting year 10,852,400

Section V:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. (Print)

Last name

Miles

First name

John H.

Title

Plant Manager

B. Signature

Date

4/5/91



## Section I: Generator identification

B. Name Cedar Chemical Corporation

Name Union Pacific Railroad

```
city Deer Park      state TX      zip 77536
```

TRI CAS number: 00108-88-3 00067-56-1

TRI CAS number:

TRI CAS number:

TRI CAS number:

[illegible]

# FORM GS: GENERATOR ACTIVITY REPORT

## Section I: Generator identification

A. EPA identification number ARD 990 660 649

B. Name Cedar Chemical Corporation

## Section II: Transporter identification

A. EPA identification number OKD 981 605 363

Name Environmental Transportation Service

## Section III: TSD facility identification

A. EPA identification number TXD 000 742 304

Name Gibraltar Chemical Resources

address P.O. Box 248 - Hwy I55

city Winona state TX zip 75792

## Section IV: Waste identification

1. Waste description: Waste, Flammable Liquid, NOS, UN 1993 (RQ Toluene)

TRI Y CAS number: 00108-88-3 00067-56-1

| SIC  | SC  | WFC  | OC | ST   | EPA WC | AMOUNT | UOM    | D |
|------|-----|------|----|------|--------|--------|--------|---|
| 2879 | A37 | B101 | A  | M134 | D001   | 89,100 | Pounds |   |

2. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |

3. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |

4. Waste description: \_\_\_\_\_

TRI \_\_\_\_\_ CAS number: \_\_\_\_\_

| SIC | SC | WFC | OC | ST | EPA WC | AMOUNT | UOM | D |
|-----|----|-----|----|----|--------|--------|-----|---|
|     |    |     |    |    |        |        |     |   |



FORM WM: WASTE MINIMIZATION

X NO WASTE MINIMIZATION OCCURRED IN THE REPORTING YEAR  
(if no waste minimization occurred, do not complete this form)

Section I:

A. waste description:

B. EPA waste code

C. state waste code

-----

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D. SIC code

E. source code

F. form code

G origin code

-----

A\_ \_

B\_ \_

\_ system type M\_ \_

H. TRI constituent \_\_\_\_\_

I. CAS numbers 1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_  
5. \_\_\_\_\_

Section II:

A. quantity generated in previous year \_\_\_\_\_

B. quantity generated in reporting year \_\_\_\_\_

C. UOM \_\_\_\_\_ D. density \_\_\_\_\_. \_\_\_\_ (1) lbs/gallon (2) sg

E. was this waste recycled in reporting year:

1 yes (continue to BOX F)  
2 no (skip to Section III)

F. on-site recycling:

quantity recycled on-site in reporting year \_\_\_\_\_

G. off-site recycling:

quantity recycled off-site in reporting year \_\_\_\_\_



STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

8001 NATIONAL DRIVE, P.O. BOX 8913  
LITTLE ROCK, ARKANSAS 72219-8913  
PHONE: (501) 562-6533  
FAX: (501) 562-2541



April 3, 1991

CSN: 54 0068 PERMIT NO  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SORT: PERMIT, COMPLIANCE  
FEES:

Mr. Allen T. Malone  
Apperson, Crump, Duzane and Maxwell  
Suite 2110, One Commerce Square  
Memphis, TN 38103

RE: RFI/CMS Scope of Work document for use in conjunction with the Cedar  
Chemical CAO

Dear Mr. Malone:

You will find enclosed a copy of the generic RFI/CMS Scope of Work employed by the Department in corrective action orders and permits. I will provide you alternative language for portions of the draft consent order regarding Cedar Chemical as soon as possible. Hopefully, we will be able to meet our goal of having a fully executed CAO by the end of this month.

If you have any questions regarding this matter please feel free to contact me.

Sincerely,

Sammy R. Bates  
Manager, Enforcement Branch  
Hazardous Waste Division

SB/ckh:LTR87

Enclosure



F

**STATE OF ARKANSAS  
DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY**

8001 NATIONAL DRIVE, P.O. BOX 9583

LITTLE ROCK, ARKANSAS 72209

PHONE: (501) 562-7444

FAX: (501) 562-4632

September 10, 1990

CSN: 54-0068 PERMIT NO. \_\_\_\_\_  
MEDIA: AIR, WATER, SOLID, HAZARDOUS  
SOURCE: PERMIT, COMPLIANCE  
FEES: \_\_\_\_\_

Mr. Joe Porter  
Cedar Chemical Corporation  
P. O. Box 2749  
West Helena, AR 72390

RE: Cedar's CEI violation response of July 24, 1990.

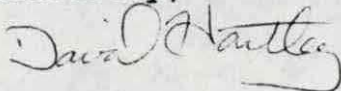
Dear Mr. Porter:

After careful review of the available data and the pertinent RCRA regulations, we do not feel it would be prudent for Cedar to discharge purged ground water at this time. We feel that the ground water may contain listed hazardous constituents and therefore should be disposed of accordingly. By discharging to your Biotreatment Plant, Cedar may be subjecting the plant to RCRA permitting and/or closure requirements.

We strongly advise detailed characterization of the purged ground water followed by off-site disposal at an appropriate facility. I recommend that an Appendix IX analysis be done on one of the most contaminated wells, either 6B or 6C. This information would not only be beneficial for disposal purposes, but would also be useful for Cedar to look at treatment technologies for future remediation of the ground water. I understand that Cedar is not planning to continue monitoring on all wells until a second consent administrative order is issued.

Please advise me as to what you intend to do. If I can be of any assistance or you have any questions, feel free to call me.

Sincerely,



David Hartley  
Geologist  
Hazardous Waste Division

DH/ckh:LTR1016